DEFENSE CATALOGING AND STANDARDIZATION PROGRAMS

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DEFENSE CATALOGING AND STANDARDIZATION PROGRAMS

WEDNESDAY, JANUARY 30, 1957

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON MILITARY OPERATIONS
OF THE COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, D. C.

The subcommittee met, pursuant to call, at 10 a. m., in room 1501, New House Office Building, Hon. Chet Holifield presiding.

Present: Representatives Holifield, Fascell, Griffiths, Riehlman, Lipscomb, and Minshall.

Also present: Herbert Roback, staff director; James F. Eckhart, counsel; and Robert J. McElroy, investigator.

Mr. HOLIFIELD. The subcommittee will be in order.

The purpose of this hearing is to review progress in the defense cataloging and standardization programs being conducted under Public Law 436, 82d Congress.

You gentlemen associated with these programs are aware that this subcommittee has a deep and continuing interest in these important aspects of military supply management. From time to time the subcommittee has held hearings on cataloging because in many ways it is fundamental to efficient performance in all other phases of military supply management and operations.

The subcommittee members will recall that a few years ago this subcommittee, under the chairmanship of my distinguished colleague from New York, Mr. Riehlman, sat through a 9-hour presentation of the Federal Catalog program. We trust that the presentation by the Department of Defense witnesses at today's hearings will be considerably shorter.

It is my understanding that the identification phase of the catalog program is completed and that major attention now must be given to the conversion and utilization phases.

Mr. Roger Gay, the director of the catalog and standardization programs, will review progress in this field after an introductory statement by Mr. Robert Lanphier, who has been Acting Assistant Secretary of Defense for Supply and Logistics. Mr. Lanphier has responsibility, delegated by the Secretary of Defense, for carrying out the congressional mandate in Public Law 436.

Before hearing Mr. Lanphier and Mr. Gay I would like to make a brief additional comment on the standardization program. Our subcommittee intends at these hearings to give major emphasis to standardization. This will be, I believe, the first fullfledged hearing on defense standardization since Public Law 436 was enacted in July of 1952. So far as I am aware, no congressional committee heretofore has systematically examined this program.

Today this subcommittee will be getting a thorough presentation on standardization for the first time. We intend to examine this program periodically in much the same manner as we have examined the Federal catalog program.

It is my impression that the accomplishments of the standardization program are relatively few. In a few months Public Law 436 will be 5 years old. Whether the slow rate of progress is due to the magnitude and complexity of the job, the lack of sufficient technical personnel, the inertia and reluctance of the military departments to cooperate, or the lack of understanding by the officials directing this program or any combination of these factors, I do not know.

The subcommittee intends to evaluate the program on the basis of the testimony received here today. Consequently, we want full and frank testimony by all the witnesses.

The subcommittee does not want to hear merely self-serving statements or selected information which gives a distorted picture of accomplishments.

Speaking for my subcommittee, I can assure you gentlemen that we will try to be fair and objective in our evaluation. We do not hesitate to criticize, because criticism for constructive purposes is a function of this subcommittee. But we are more interested in helping you gentlemen than in finding fault because we are convinced, as I am sure you are, that a bona fide standardization program will save the taxpayers of this country many billions of dollars.

Our first witness this morning will be Mr. Robert Lanphier, Deputy Assistant Secretary of Defense for Supply and Logistics.

STATEMENT OF HON. ROBERT LANPHIER, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR SUPPLY AND LOGISTICS; ACCOMPANIED BY ROGER GAY, DIRECTOR, CATALOGING, STANDARDIZATION AND INSPECTION, OFFICE OF ASSISTANT SECRETARY OF DEFENSE FOR SUPPLY AND LOGISTICS; JOHN J. DUNN, STAFF DIRECTOR, STANDARDIZATION DIVISION; AND VINCENT F. CAPUTO, STAFF DIRECTOR, STORAGE AND DISTRIBUTION DIVISION

Mr. HOLIFIELD. Mr. Lanphier, I understand you have a prepared statement and we will be happy to hear you at this time.

Mr. LANPHIER. Thank you, Mr. Chairman.

Members of the committee, it is a real pleasure for us to be here this morning because of your continuing interest, as you have just mentioned, and also because I think this committee is probably the father of Public Law 436.

We appreciate the efforts of the committee in the past and your program for this year to inquire thoroughly into what we have done and we appreciate the criticisms you have given us as they have been constructive. I personally believe, based upon the 3 years that I have been here, that we would not be where we are if we had not had that constructive criticism from this committee.

Mr. HOLIFIELD. Well, Mr. Secretary, we do try to be constructive. We are not anxious to hit the headlines.

From years of familiarity with the subject starting from the date when I first introduced a bill which became Public Law 152, and provided for a Federal catalog, I sincerely believed that cataloging and standardization were two tools of procurement which are absolutely invaluable and the better they are, the better the job that can be done, and that is our interest.

Mr. LANPHIER. We are convinced of that.

Mr. HOLIFIELD. Thank you. Will you proceed?

Mr. LANPHIER. At the end of December 1956, there were 3,128,613 items in our military supply systems.

Mr. HOLIFIELD. And there were over 12 million items before you started your catalog?

Mr. LANPHIER. I think that is anybody's guess, of what it might have been.

Mr. HOLIFIELD. Well, the common figure that was given was that there were 12 million items, many of which, of course, were duplications.

Mr. LANPHIER. That is correct.

How do I know? Because we had just completed the identification phase of the Federal cataloging program. This is a requirement of Public Law 436 and has been our promise to Congress. I think you and we can be equally proud of this achievement. It paves the way for many other programs which will utilize to a maximum degree Federal catalog data in establishing significant supply management improvements.

This Federal catalog system has been developed; we are now putting it into use; and it must be maintained in support of the supply system in the Department of Defense. To provide adequate service to our supply systems, our catalog organization, facilities and operations must and will be prepared to provide rapid service for the day-to-day procurement and provisioning programs of the military services.

We have introduced an automatic data processing system into our cataloging operations and are initiating rapid transmission systems for catalog data. In brief, we are gearing the total cataloging operations to meet the speeds dictated by modern supply management.

Successful completion of the identification phase of the Federal catalog system could not have been accomplished in such record time without the fine cooperative spirit and dedicated efforts of the Army, Navy, Air Force, and Marine Corps. In our program of molding the cataloging system to continuous day-to-day maintenance operations, the military services are continuing to demonstrate excellent cooperation and unanimity of objective.

As you know, our program contemplates three major activities: First, the identification of every item in the military supply systems; second, the conversion of these items to the uniform identification and single stock number provided for by the Federal catalog system; and third, to follow through to assure effective utilization of the catalog.

On June 4, 1954, a conversion schedule was set up which required completion of all Federal classes by December 31, 1958, and earlier wherever possible. We are constantly trying to accelerate the rate of conversion where it can be done without impairing the ability to provide logistic support to the military forces.

Problems have been encountered and there have been temporary setbacks, but I believe you will agree that in a program of this magnitude, such problems were to be expected. Where necessary, revisions have been made in the conversion schedules to accommodate necessary logistic support requirements and to shift efforts to areas offering a more immediate return. At one time or another, each of the services has been behind schedule in several commodity areas.

The Army and Navy are on schedule. The Air Force, while slightly behind at this time in completing several supply classes as scheduled, has expedited the conversion in areas having future due dates. Therefore, there has been completed a total number of individual conversion actions considerably in excess of the quantity programed for completion by the end of 1956.

The Air Force has taken the necessary steps to get back on schedule before the end of this year.

We had scheduled for completion 1,009,000 conversion actions by the end of 1956. Our year-end reports show that we have completed 1,597,000 conversion actions by December 31, 1956. This represents the completion of 588,000 conversion actions over the scheduled requirement.

When we consider the magnitude of the conversion task——

Mr. HOLIFIELD. At that point, Mr. Secretary, will you explain what you mean by "conversion action" for the record?

Mr. LANPHIER. That means to change the actual stock number in the warehouse on the commodity as it is in storage, to change it on the stock record card with the supply management—to change it in the supply manual, repair-parts book, and other places where reference may be needed to obtain that part for any military function.

Mr. HOLIFIELD. Does it also mean to start using it in procurement?

Mr. LANPHIER. And to start using it in procurement; yes, sir. I did not mention that in future requisitions which come about as the result of supply-management review the requisition is on the new number. We do not procure on an old number after conversion action.

Mr. HOLIFIELD. What is the total number of conversions—whatever the identification is?

Mr. LANPHIER. Whatever the identification is; yes, sir. The number of your identifications is over 3 million. By the time we complete conversion it might be less, owing to standardization actions in the meantime, by the elimination of items which, by their very description, were common and as we find that out in the system—or it might be greater as the result of new items added into the system.

When we consider the magnitude of the conversion task, the services' progress to date has been more than satisfactory. Completion of the conversion phase by December 1958 now seems assured, barring the development of conditions approximating a state of emergency. We will continue to press for the completion of conversions as far ahead of schedule as practicable in an effort to bring this phase to a close in advance of December 1958.

Although conversion will be complete when the changeover from the use of existing methods of identification to the use of Federal catalog data is accomplished, our objectives go well beyond even this accomplishment. The utilization of the Federal catalog system in areas heretofore unexplored will continue to play a most prominent role during the ensuing year.

Utilization, as we refer to the term, means any management improvement made possible or facilitated by the existence and use of Federal catalog data. At the OSD level, we are continuously studying possible applications of Federal catalog data which will improve management. In addition, those applications individually developed within the military departments will be studied for possible application on a Department of Defense-wide basis.

Management improvements resulting from the use of catalog data involve (1) the simplification of existing operations and (2) the development of management techniques which were not possible or practicable prior to the existence of a common language.

Possibly the most obvious example of simplification can be seen in the Department of Defense program for the screening and redistribution of excess property. That program has been in operation since well before there was a common language. Because offerings of one service were made in the language of stock numbers and description not completely understood by potential users, it sometimes became a matter of technical research for the potential user to determine whether the offered item was one for which he had a requirement. Now, with a uniform stock number and description, the relative simplicity of identification is quite obvious.

The procedures for the screening of excesses have been improving continually. Accordingly, redistribution within the Department of Defense has increased, particularly since we have been able to use the Federal stock numbers. In fiscal year 1954, redistribution amounted to approximately $74 million; in fiscal year 1956 it was over $114 million. It is evident that the Federal catalog data played an important part in this accomplishment, even though it was accompanied by other management improvements.

The other type of utilization, which we refer to as the development of new management techniques, is the area of principal concern to the Department of Defense because it is the area where progressive application of catalog data, as a management tool, is possible. It is exemplified by such programs as the single manager plan and the interservice supply support program.

Other current management improvement programs which are made practical or facilitated by utilization of the Federal catalog data include the single service procurement assignment program, the standardization program, and the inventory management program. Utilization, in the Department of Defense, is a fact and a continuing effort will be applied to assure its continuance and expansion.

Moving on to our standardization program, I am pleased to report that the Department of Defense has this most important program moving at an ever-increasing rate. Our organizations are established; our standardization schedules and assignments are completed; programs are operating; and marked achievements are being realized in the field of standardization. We consider our cataloging and standardization programs fundamentally important prerequisites to establishing major improvements within and between the military departments in the field of supply management. Our resources, both those currently available as well as those being budgeted, are con-

sidered adequate to achieve our programs as scheduled and compatible with the speed with which our supply systems can absorb these changes. There are vast possibilities for improvements in Department of Defense supply management which can be realized when a uniform identification system is in use for all items and maximum standardization has been achieved.

Before concluding my formal statement, I would like again to express appreciation for this opportunity to appear before you and to acknowledge the value of the interest and support of your committee in these programs. Your interest in our progress over the past several years has contributed materially to mutual understanding of our problems. We hope to have the opportunity to continue this close relationship with your committee.

With your permission, I would now like to present Mr. Roger E. Gay, Director of Cataloging, Standardization, and Inspection, and also Mr. John J. Dunn, my staff director for standardization, who will present further details regarding these programs which I feel will be of interest to the committee.

Mr. HOLIFIELD. Thank you, Mr. Lanphier.

Now, I will inform the committee members that Mr. Lanphier has asked to be excused before the final presentations and so I think maybe at this time it might be as well to direct a few questions to him and then we will excuse him if he requests it.

Mr. LANPHIER. Thank you.

Mr. HOLIFIELD. Mr. Eckhart here of our staff has gone through this thing very carefully and after the members have asked any questions they wish, why, I will ask him to direct some questions to you, Mr. Lanphier.

Are there any questions from the members at this time?

Mr. RIEHLMAN. I have a question on the organization and the program that he has alluded to in the last part of his statement, regarding the date set for your standardization program to be completed and so forth—will that be forthcoming from some of these other witnesses?

Mr. LANPHIER. You will receive that in the standardization presentation, sir.

Mr. RIEHLMAN. That is all I have.

Mr. HOLIFIELD. Mr. Eckhart?

Mr. ECKHART. I am interested in this example on page 4, Mr. Lanphier, where you talk about the redistribution of excess.

Mr. LANPHIER. Yes, sir.

Mr. ECKHART. In 1954 as distinguished from what it was in 1956, will you advise the committee whether both of these figures represent distribution of excess within the military departments, or whether those figures also include distribution to other agencies.

Mr. LANPHIER. No; that is only within the military departments.

Our excess distribution is first attempted within a military department, itself. For instance, one tech service of the Army might have an excess and we go to another tech service; and then the next step is to give it to the Navy or the Air Force, as the requirements may be. We are not talking about excesses which go for disposal or to the GSA or any other division.

Mr. ECKHART. Are you in a position to tell us what percentage of excess property is presently being reported under the FIIN numbers?

Mr. LANPHIER. I do not have that.

Mr. CAPUTO. About 46 percent.

Mr. ECKHART. Have there been other areas of property that are required to be reported since this figure for 1954 was generated? For 1956, did we have reportable property which was not reportable in 1954 and would not that have an effect on this figure?

Mr. LANPHIER. Excesses have been reported regardless of their nomenclature all during that same period.

Mr. ECKHART. Well, the point I am making, Mr. Secretary, is that aircraft, for example, was not reportable in 1954 and that represents a sizable dollar volume; does it not?

Mr. LANPHIER. Oh, yes.

Mr. ECKHART. Both in terms of excess property and cost and it was reportable in 1956.

Mr. CAPUTO. Mr. Eckhart, may I clear that up?

Mr. ECKHART. Yes.

Mr. CAPUTO. The reportable and nonreportable you are referring to are items we report to GSA or do not report to GSA, but this utilization is within DOD. Every item of supply is reportable. There is no line of delineation as to whether it is reportable or nonreportable within DOD.

Mr. ECKHART. I wonder if we might have a statement confirming this 44 or 46 percent of excess property purportedly being reported by FIIN numbers? The committee has received information that is at variance with this figure.

Mr. HOLIFIELD. In 1954 how much was reported by FIIN numbers, in order to make this clear?

Mr. CAPUTO. I cannot say. We can look it up for you, Mr. Chairman, and let you know.

(The information referred to is as follows:)

The amount of excess property reported for centralized screening by Department of Defense activities in fiscal year 1954 was $752,260,442 worldwide. In fiscal year 1956, it was $852,008,350.

Statistics to identify the use of Federal stock numbers in excess listings were not maintained prior to December 1, 1956. Hence, data for fiscal year 1954 is not available. During the month of December 1956, 31.5 percent of all line items reported for centralized screening carried Federal stock numbers.

The difference between this figure and the percentage of all items converted (46 percent) as of December 31, 1956, is attributable to two principal factors. Listings of items received by the central screening unit during the month of December were made up in the several months preceding, while conversion was still progressing toward the year-end figure. This makes a certain amount of time lag inevitable. In addition, many items in excess listings had not been identified in the catalog program because it was determined, when they were examined for cataloging action, that they were being eliminated from the system. In this connection, Department of Defense instructions provide that any item "which will be declared excess and disposed of within 12 months after the completion of the identification operations in the scheduled commodity area * * * may be excluded from the program."

Mr. HOLIFIELD. Well, that would show the growth in the use of FIIN numbers as a tool for recognition and transfer of property, if we had the figures between 1954 and 1956.

(The information referred to is as follows:)

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE,
Washington, D. C., February 6, 1957.

Mr. JAMES F. ECKHART,
Counsel, Subcommittee on Military Operations,
Committee on Government Operations, House of Representatives.

DEAR JIM: During hearings before the Subcommittee on Military Operations on the subject of the defense cataloging and standardization program, January 30, 1957, the subcommittee asked for the status of catalog conversion in fiscal year 1954. The information requested is as follows:

	Conversions	Percent of total scheduled
June 30, 1954	125,644	4
Dec. 31, 1956	1,597,925	46

If I can be of any further assistance, please let me know.

Sincerely,

V. F. CAPUTO,
Staff Director, Storage and Distribution Division,
Office of Requirements, Procurement and Distribution.

Mr. ROBACK. Mr. Chairman, that example was cited as an instrument in the use of the catalog. We have information that presently in the distribution of excess, 25 percent of the material is under FIIN numbers.

Mr. LANPHIER. Not more than 25 percent of the material is under FIIN numbers? Of the type of material that becomes reported, more of it would be—we have a tremendous number, because of the common-use character of much of the material, it comes within reportable excess.

Mr. ROBACK. Well, we do not want to belabor the point, but I believe Mr. Eckhart is trying to find out if in the present distribution of excess we have, first, 25 percent of the property cataloged under the FIIN numbers, and secondly, if a lot of new items have come into redistribution which were not previously reportable, so that if there is an increase in distributable property, it does not necessarily reflect the use of the catalog.

Mr. CAPUTO. Let me say, I don't know where that 25 percent figure comes from. Let me say that the items that are reportable or nonreportable are the items we report or do not report to GSA. Every item of supply is reportable within and among the services.

For example, we have 1,597,000 completed conversions out of an estimate of 3,487,000, and that is 46 percent of the entire conversion. We have instructed our Materiel Redistribution Division that, at all times upon completion of a conversion, it must be reported with the new FIIN number, and that is where we got the 46 percent. Forty-six percent, as of December 31, have been completely converted of the total number we had scheduled for conversion.

Mr. HOLIFIELD. When that is reported as excess by either agency, it is reported under FIIN number?

Mr. CAPUTO. Yes, sir.

Mr. HOLIFIELD. And, of course, if it is not used by the services, it goes to the GSA also under FIIN number?

Mr. LANPHIER. That is right.

Mr. ECKHART. What has been the attitude of the Defense Controller toward allocation of funds for standardization work?

Mr. LANPHIER. We had adequate funds allocated for this purpose. We feel that the funds that have been allocated for the standardization program have been adequate to the rate at which we could absorb the standardization program.

Probably our greatest problem is the employment of adequate technical skill to carry out the program.

Mr. ECKHART. Well, now, has it been necessary before you start, you might say, your second phase, or your new phase of standardization, to have completed your identification program, or have you been working concurrently? When you complete identification of certain classes, have you been starting the standardization program immediately in that class that has been completed?

Mr. LANPHIER. The standardization program has been complicated by two conditions:

One, to continue the old way where certain groups of things were taken, regardless of whether they have been identified or not to the new procedure, and where the allocation of standardization schedules on the basis of classes, with responsibility allocated to individual departments.

Now, we have determined what would go into the standardization schedule based upon an appraisal of those items which might get us the greatest dollar of return by standardization effort, and also bearing in mind the identification should be completed before we can undertake it. We don't have to have conversion before we can undertake standardization. As long as we have the identification, the standardization process can go on.

Mr. HOLIFIELD. Well, now, the information we have shows that less than 10 detailed plans have been completed and approved by the Department of Defense in the new phase of standardization. Is that correct?

Mr. LANPHIER. That is correct; I think it is.

Mr. HOLIFIELD. And the first four of these cover locomotives, locomotive accessories, track materials, and chemical weapons.

Now, it would seem, as a layman, to me, that you would be operating in a very limited field there.

Mr. DUNN. May I comment on that?

Mr. HOLIFIELD. Yes.

Mr. DUNN. The priorities of classes in the program for each fiscal year which has been developed under the standardization program, are conditioned by several considerations.

The basic one, of course, is the one Mr. Lanphier mentioned, how fruitful are the benefits that will come from standardization in that area.

This necessarily has to be tempered by what resources are available at the point in time standardization attention can be given to the classes.

Now, in the specific instance you cite, Mr. Chairman, we were faced with a choice between applying resources available in the Transportation Corps for standardization purposes or permitting those resources to sit on their thumbs doing no standardization. In that kind of a situation we elected to provide in our program for available

resources in the Transportation Corps to be applied in the areas, obviously, where they had competence. So that you will find that what might be apparent contradictions in the importance, standardizationwise, of particular classes in these fiscal year programs——

Mr. HOLIFIELD. Well, it is not apparent contradictions. I am not quarreling with the idea of going ahead with the resources wherever they are available, but to say that one of the detailed plans have been completed and approved by the Defense Department and if that happens to be in relatively small classes of property in terms of items, not necessarily in terms of dollars but terms of items, it would seem to me you are speaking of a relatively unimportant adaptation of standardization to the whole program.

Mr. DUNN. Well, if by that you mean some of the early plans perhaps are not the most——

Mr. HOLIFIELD. They are not common-use items.

Mr. DUNN. The greatest number of items—that may be true in some cases.

Mr. HOLIFIELD. Well, it is true in all cases, it would seem to me, unless I have been misinformed.

For instance, in the standardization of locomotives and locomotive accessories, while it is admirable and desirable, still it is in a very limited field compared to the entire supply system.

Mr. DUNN. I would agree as to the relationship of transportation equipment and many items of common use.

I do think, however, a study of our program will disclose that a high priority is assigned to items of common use of great volume; they have a very high priority.

Mr. LANPHIER. The schedule of classes will be in Mr. Dunn's presentation.

Mr. HOLIFIELD. All right.

Mr. LANPHIER. He will explain that very thoroughly.

Mr. HOLIFIELD. We will take that point then.

Mr. ECKHART. Along that same line, Mr. Chairman, concerning the Secretary's program, the Assistant Secretary of the Navy, Material, on December 19, 1955, wrote a letter to the Assistant Secretary of Defense for Supply and Logistics in which he stated, in effect, that the resources for the 1956 program are insufficient, the budget reduction ordered for 1956–57 precludes further reduction in other programs, and the standardization program can be carried forward only if it is recognized and accepted as a true economy measure and planning could be greatly advanced by additional funds.

The Navy's work on standardization is held primarily to maintenance of specifications and current procurement standards. Work assignments in the new phase for 1956 will not be completed.

Now, I understand that the assignments for 1956 for the three military departments call for the production of 74 detailed plans. We are now in the second quarter of 1957, and only 10 of those plans have been completed.

Mr. DUNN. Mr. Lanphier, if I may answer that——

Mr. LANPHIER. Yes.

Mr. DUNN. I would like to respond to that.

As will be disclosed in my briefing later, the initial programs for fiscal year 1956—and it was the first program under our new plan—

were subject to some radical adjustments late in the year. The date of the letter that Mr. Eckhart cites—it is from Mr. Folger?

Mr. ECKHART. Yes, sir.

Mr. DUNN. And the date of the letter is what?

Mr. ECKHART. December 19, 1955; but refers to the 1956–57 program.

Mr. DUNN. Right.

In January 1956—and I do think that a lot of this detail would be better left to my own share of the testimony when we get to it, but on that point, in January 1956, having in mind such conditions as were cited in Mr. Folger's letter and what were comparable conditions found in the other two military departments, Mr. Wilson in January 1956 directed each of the military departments to assign to the program sufficient resources, dollars, and personnel ceilings which would permit them to bring the program current at the end of fiscal year 1956. That is an action subsequent to the letter citing the Navy's situation at that time. There have been problems of getting this kind of an effort underway.

Mr. ECKHART. Mr. Chairman, I have a copy of that memorandum here of Mr. Wilson, dated January 25, 1956.

That was followed up by a memorandum of Mr. Fogler, again, dated May 25, 1956, which resulted in another letter in response to that from the Assistant Secretary for Financial Management of the Department of Navy, Mr. Franke, in which he denied funds, even on the basis of the memorandum of Secretary Wilson. Mr. Franke makes the statement, and I am quoting:

> It would appear, therefore, that if the standardization program is considered to have a priority higher than other programs carried on by the several bureaus, that a directive requiring the necessary reprograming be promulgated. Inasmuch as the determination of ceiling requirements is dependent upon reprograming actions in this instance, prompt advice regarding any future reprograming which may possibly be effected should be submitted.

Now, I am trying to understand what the position of the Navy Controller here is in terms of the memorandum of Secretary Wilson.

Mr. DUNN. I think perhaps it would be well to put that off until such time as the Navy would be testifying. They are scheduled, as I understand, to testify later during these hearings, and I am sure they have that information as to the details of what went on between Mr. Fogler and Mr. Franke concerning Mr. Wilson's directive.

Mr. ECKHART. May I return from that question at this time to what Mr. Lanphier stated, that adequate personnel and resources were available.

Mr. LANPHIER. They are.

There was difficulty in 1956 in the programing on the basis that the old standardization program was late in its reorientation with respect to the budgeting that occurred for that fiscal year but, as far as I have been given to understand by any department, it is a question of funds and spaces available for 1957 and the program for 1958, unless I am wrong.

Mr. ECKHART. Well, I will suspend questioning on that, and the subcommittee can determine from the military departments when they testify what they have requested in terms of personnel and funds.

Mr. HOLIFIELD. If I am correct, your 1955–56 budget was faulty, and the latter part of your 1956 budget was deficient, but the final half of the year 1956 and the present year you feel you have adequate resources?

Mr. LANPHIER. That is my understanding.

Mr. DUNN. Authority for the resources is available.

Mr. HOLIFIELD. Authority is available?

Mr. DUNN. Authority for sufficient funds is available.

Mr. HOLIFIELD. Does that authority for the resources mean they will get the resources, the manpower and the dollars, to do the job?

Mr. DUNN. Not totally, as I will bring out in my discussion, Mr. Chairman.

Mr. HOLIFIELD. You know, sometimes we have to go behind these statements that you make because you use words that are familiar, perhaps, in the Department but tend to create a different impression in the minds of a committee.

Mr. ROBACK. Is it not a fact, Mr. Lanphier, that there is no standardization budget, as such, that there is no budget presented to the Congress which says, "This is for standardization"?

Mr. LANPHIER. There is not, because of trying to identify that certain people are engaged in standardization, as such—it gets into many aspects of the Department, to begin with.

Mr. ROBACK. Is there any way to estimate what the cost of this program has been to date, and what it will be in terms of the preparatory work for standardization? I don't mean the standardization work, but the preparatory work.

Mr. DUNN. I have some figures here wih respect to man-years as related to each of our fiscal year programs which I will present in due course, if you would like, on that.

There is the problem which you cite, however, Mr. Roback, of identification of this effort in the budget structures of the military departments and, as I will perhaps bring out in my presentation, there may be an open question as to whether the cost of establishing this identification in the budget structure is worth the cost it is going to require in the management of the budget.

We have taken several preliminary steps leading to that; whether it is going to be a feasible thing to accomplish is not clear at this time.

Mr. HOLIFIELD. Is it clear in our minds that such work as is being done on the standardization is not being done under a separate budget project but is being done by men who are assigned to other projects, such as identification?

Mr. DUNN. Primarily, research and development, and procurement and maintenance, is where these funds come from.

Mr. HOLIFIELD. So it is really in the status of an extra duty rather than a specific duty, as far as personnel assignments?

Mr. DUNN. For a great percentage of the job.

Mr. LANPHIER. It crosses functional lines and it takes the partial time of men and facilities, and you do not physically set aside whatever the action is out of the whole resources of the Department—the bookkeeping becomes quite difficult.

Mr. HOLIFIELD. I can understand that, but it seems to be true that it does not occupy a position of great priority in your functions.

Mr. LANPHIER. I feel that we have had the greatest support from the Assistant Secretaries of all three services for materiel to push the standardization program, and as to the resources that have been allocated, I mentioned awhile ago, the question of obtaining and maintaining adequate technical personnel to carry out the standardization program is, I think, probably, and will be, one of our major problems.

Mr. HOLIFIELD. Well, we expect it to be a major problem because we think it is of major importance; and we heard the same story when we first started on the cataloging. It had, I think, about the same type of statement until it was pointed up and it became of a little more importance to people downtown; we did not get much done on it until then.

Mr. ECKHART. Just one further question, Mr. Lanphier.

Is it true that the request to the military departments to accomplish their fiscal year programs on the basis of a reprograming of scheduled manpower and resources has been unsuccessful to date?

Mr. DUNN. If I may, Mr. Lanphier, I would like to respond to that.

Mr. LANPHIER. Yes.

Mr. DUNN. That is not so. Initially, there were difficulties in accomplishing the reprograming that was contemplated by the programs we issued. There were difficulties.

However, beginning with fiscal year 1958 the guidance we have provided in our program constitutes a basis for the budget estimates developed to support it. And beginning with fiscal year 1959 the program itself will be completely in, if you like, the budget cycle. The guidance will be in the hands of the Department at the time the original estimates are made, and will carry through the entire budget cycle.

Mr. ECKHART. Does this mean that the budgeting for this is going to be pushed back 1 year?

Mr. DUNN. Well, if by "budgeting" you mean fiscal support, the answer is "No."

Mr. ECKHART. I mean, bringing it into the regular budget cycle.

Mr. DUNN. Into the regular budget cycle will be accomplished the first time in fiscal year 1959. Up to that time, we have been dependent upon reprograming of funds, and the funds have been reprogramed, effective beginning with fiscal year 1957, if I am correct on that.

Mr. HOLIFIELD. Which means July 1957?

Mr. DUNN. Yes, sir.

Mr. HOLIFIELD. So, as a matter of fact, we cannot expect full efficiency until July of this year, because all previous activity has been on a reprogramed basis?

Mr. LANPHIER. On a reprograming basis.

Mr. HOLIFIELD. But not on an identifiable budgetary basis?

Mr. DUNN. That is so, sir.

Mr. ECKHART. Mr. Dunn, I would like to ask you whether or not this statement which is contained in the semiannual report to the Congress for the first 6 months of 1956 is correct, where it says that the fiscal year 1958 program has been established in time to be included

with the budget estimates and brought into the regular budgeting cycle, and reprograming should not be necessary after fiscal year 1957.

Mr. DUNN. That was true at the time it was written. It is not correct, looking back from this point.

Subsequent to that submission of that report, we encountered difficulties in coordination, and we were not able to get it to the Comptroller, as we had every reason at that time to expect.

Mr. ECKHART. It has been, then, pushed back 1 year?

Mr. DUNN. If you mean getting back into the complete budget cycle, that is so, without any corresponding effect on the reprograming of funds.

Mr. LIPSCOMB. Mr. Chairman, I think you mentioned 1957; I think it is 1958.

Mr. HOLIFIELD. I thought you answered my question in the affirmative——

Mr. DUNN. Fiscal year 1958 begins July 1957—is that what your question was a minute ago, Mr. Chairman?

Mr. HOLIFIELD. Yes. But will you harmonize that with your statement that it would not get into the budget cycle until 1959?

Mr. DUNN. The complete budget cycle, it will be effective beginning July 1, 1958, for fiscal year 1959.

Mr. ROBACK. Mr. Lanphier, is it not the practical situation that all these assignments were made to the different services, and then you looked around and did not have the resources to do it and said, "If we are going to do the job we need funds," and now you are in the process of seeing how to get funds for the job? You gave them assignments without funds and now you are grappling with the job of getting the funds to do it?

Mr. LANPHIER. We gave them the assignments to review, for developing of funds and spaces that would be required to carry out the assignment, yes, we had to start some place.

Mr. DUNN. To put this fully in focus, the requirement to provide resources did not become effective until the fiscal year programs had been issued to the military departments. That is a separate action from distribution of responsibility by virtue of the assignments that took place and it is a subsequent action to the assignment of responsibility, so that—what I am trying to make clear is that the assignment of the 500 classes of supply took place in June 1955 and that constituted in and of itself merely an identification of which department was responsible for which class. When they were to carry out their responsibilities with respect to these assignments, it became effective with the issuance of the fiscal year programs which, in themselves, identified class so-and-so, scheduled for attention in that quarter of the year——

Mr. ROBACK. But in that class the several military departments came back and said, "We cannot do that job, we cannot carry out this assignment until we have twice as many people and a regular allocation of resources and funds for it"?

Mr. DUNN. That is right.

Mr. ROBACK. And that is the thing that is going on now, you are figuring how to get those funds available?

Mr. DUNN. Well, with respect to what is going on now, Mr. Roback, what is going on now is the effort by the military departments to take

advantage of authority which has been extended to them, adequate to meet the requirements of this program.

The problem at this point in time is not making available that authority. It is the taking advantage of it and doing the recruiting and doing the training necessary to support the program. The authority for funds and for ceilings is not immediately the problem.

Mr. ROBACK. You have the directive but not the money?

Mr. DUNN. That is—no; no, that is not so, Mr. Roback. I am trying to make clear that authority to obligate funds and to hire people is available to the standardization people in the military departments. It is sufficient for the program as of now. The problem is finding the people and training the people and getting them to work.

Mr. HOLIFIELD. So that I will understand this, I will have to ask you a question.

Mr. DUNN. Yes.

Mr. HOLIFIELD. You do have the authority to hire, there are funds available right now?

Mr. DUNN. They have been reprogramed; yes, sir.

Mr. HOLIFIELD. But you are not able to find people to spend those funds?

Mr. DUNN. Not total, that is right.

Mr. LANPHIER. Not in total; no.

Mrs. GRIFFITHS. May I ask some questions?

Mr. HOLIFIELD. Yes.

Mrs. GRIFFITHS. How many people do you have working at it?

Mr. DUNN. Well, I will have to check my figures, if I might.

These are the totals of man-years, as best they can be estimated in the budget circumstance we have discussed earlier.

Mr. ECKHART. Would you explain why you have to use man-years here?

Mr. DUNN. I thought we had made it clear in the earlier discussion.

The great bulk of this work is carried on by people whose primary duties lie in other functions such as research and development, maintenance and procurement.

Mr. HOLIFIELD. Therefore, it is computed on part-time activities?

Mr. DUNN. That is right, sir, and necessarily it is an estimate.

Mr. HOLIFIELD. Yes.

Mr. DUNN. And how accurate it is, is perhaps open to question.

The estimated expenditure of man-years in fiscal year 1956 amounted to 2,125 man-years. The estimated requirement for the program for fiscal year 1957 is 3,201 man-years. The estimated requirements for fiscal year 1958 is 3,627 man-years, showing a progressive requirement for additional support, obviously.

Mr. HOLIFIELD. Well now, if I understand that, that would be translated into that many employees?

Mr. LANPHIER. 3,600 people; yes.

Mr. HOLIFIELD. Each one working a year's time, and if that be so, that is a considerable amount of attention, 2,100 people.

Mr. DUNN. It is, indeed.

Mr. HOLIFIELD. Working on it. How does that compare to the cataloging personnel in total?

Mr. DUNN. I have no knowledge of that.

Mr. RITTER. Mr. Chairman, if I may answer, I am George Ritter, staff director of cataloging.

We have 6,000 people assigned to the cataloging program in fiscal year 1957 and that dropped to 5,200 in 1958.

Mr. HOLIFIELD. I was just going to follow through on that.

If you claim, as you appear to do, that you are doing the identification job, that is the major part of your cataloging job—I understand it will always be, to a degree, in progress. Why don't these men that have this experience be made available to the standardization program, could they not be transferred to standardization?

Mr. LANPHIER. No. They are not necessarily technical personnel.

Mr. HOLIFIELD. Well, I assume they have to have some technical competence to identify military items and classify them.

Mr. DUNN. There is a limited amount of transferability of skills between cataloging and standardization and I will bring that out in my presentation. Some of it has gone on, however.

Mr. HOLIFIELD. I would think there would be a great deal of routine work that could be done by that type of personnel.

Mr. DUNN. There is some, sir.

Mrs. GRIFFITHS. Mr. Chairman, may I ask another question?

Mr. HOLIFIELD. Yes.

Mrs. GRIFFITHS. Do you have 2,100 people who work at this or do you have 4,200 people who work half time, or do you have three times the amount that work one-third of the time on it?

Mr. DUNN. As I said, Mrs. Griffiths, the man-year requirements are based on estimates as best they can be determined of the amount of time people put in part time on this work.

Mrs. GRIFFITHS. I see.

Mr. DUNN. The number of bodies represented by these man-years is a matter of complete speculation. It might be twice the number of man-years or 3 times or 10 times.

Mrs. GRIFFITHS. I see.

Mr. DUNN. Depending on the amount of part time each individual, you might say, engages in or puts in on the program, so I just cannot give you that.

Mrs. GRIFFITHS. Well, would you say you had possibly 2,100 people working on it?

Mr. DUNN. I think that would be a reasonable sort of an estimate.

Mrs. GRIFFITHS. And who are these 2,100 people? I mean, what kind of skill do they have to have?

Mr. DUNN. They are basically professional engineers engaged in, primarily, research and development or maintenance, I would say.

Mrs. GRIFFITHS. Are they Army officers or Navy officers or civilians?

Mr. DUNN. The number of military in the program is very, very limited. They are primarily civilian employees.

Mrs. GRIFFITHS. And are they located in Washington or are they located throughout the country?

Mr. DUNN. Throughout the country, in mostly every military installation.

Mrs. GRIFFITHS. And do you have somebody that actually supervises them on this work?

Mr. DUNN. Each department is responsible for the management of its depot and by direction has established an organizational unit in its headquarters responsible for managing this. That includes, obviously, such lower echelon work that goes on in the particular command.

Mrs. GRIFFITHS. How often do you get reports on what they have done?

Mr. DUNN. We get reports every 6 months from the military departments on the accomplishments in standardization.

In addition to that, our own staff in the Office of the Secretary of Defense is out almost continuously at one of the military installations or another on problems in connection with the standardization program.

I, myself, have made a number of trips to all three of the military departments basically for the purpose of imparting directly the kind of guidance we hope they will follow in this program.

Mrs. GRIFFITHS. Are you the person who does the training?

Mr. DUNN. I am not responsible directly for training. That is a responsibility of the military departments.

Mrs. GRIFFITHS. How do they give this training to these people all over the country?

Mr. DUNN. That is a question that I would prefer that you ask each of the military departments as they present their testimony.

Mrs. GRIFFITHS. Have they ever presented a report to the Defense Department on how they train men?

Mr. DUNN. No, they have not.

Mrs. GRIFFITHS. Have you ever told them how to train them?

Mr. DUNN. I have never told them how to train them; no.

Mrs. GRIFFITHS. Do you know whether they are or not?

Mr. DUNN. Yes, I do.

Mrs. GRIFFITHS. How do you know it?

Mr. DUNN. Well, I know from my understanding and I work closely with the military departments and meet with them every 2 weeks on this whole program and I do know—but you have put your finger on one of the serious deficiencies in this up to date.

There is a great need for concentrated indoctrination at all levels of the military departments.

Mrs. GRIFFITHS. Does each department have a group of trainers set up or do you have some literature, booklets?

Mr. DUNN. Again, I wish you would address that question to the military departments at the time that they testify.

We have provided a number of basic pieces of guidance which I do know the military departments have distributed appropriately, in terms of manuals describing the basic concepts and principles, I will describe those later, procedural manuals for the development of specifications and standards, and outlines of forms—all of the basic tools required to perform under the program we have provided and that, I expect, is part and parcel of any program.

What I intended to convey earlier was that there is need for additional training and indoctrination.

Mrs. GRIFFITHS. Wouldn't you think it would be simpler if the Department of Defense hired its own trainers and set up a completely organized program and sent them out and trained all the rest of them in their Department?

Mr. DUNN. I am not sure I would agree with you on that, Mrs. Griffiths; no.

Mrs. GRIFFITHS. Well, this way I would think that you might have 3 or 4 different answers.

Mr. DUNN. And that is so.

Mrs. GRIFFITHS. Yes.

Mr. DUNN. That is so.

Mr. FASCELL. As a matter of fact, you do have 3 or 4 different answers.

Mr. DUNN. That is exactly what I am saying.

Mr. RIEHLMAN. Mr. Chairman, a question.

You have referred on several occasions to people that are being used in this program as being those from research and development, and they are engineers.

Now, is it necessary to have that caliber of person to do this work?

Mr. DUNN. It is, indeed.

Mr. RIEHLMAN. It is?

Mr. DUNN. It is.

Mr. RIEHLMAN. I have heard so much of the shortage of engineers, and in our research and development program particularly, that I have been just wondering whether or not it is just a waste of manpower to put them in this field of activity, where somebody else might be trained, that would be able to carry out that activity without having to have a background of engineering.

I am bothered about that, Mr. Chairman. I just cannot see the skill that is necessary to have an engineer in this standardization program. Maybe it is true, but I would like to see it clarified.

Mr. HOLIFIELD. We will when Mr. Dunn gets into his formal presentation, I think.

Mr. LANPHIER. There is a form of standardization which is not of a purely technical character, namely, the analysis and elimination of varieties of makes and models which are available, let us say, on a commercial market, and which may have been selected by one department or another to buy from one source or another, where they could be interchangeable, and we are trying to identify those by simple specifications, identification of makes and models, which is one element of standardization.

In that field people in the identification phase of our task are helpful.

We have recently conducted an intensive review of that character, and I might tell you, for illustration, without getting into technical design, taking the photographic material commodity area, we are conducting that analysis preparatory to making a single-manager assignment for the management of photographic material.

I believe I am correct that, to use an example, in the first analysis we found that in photographic materials and developing solutions there was only a 3-percent commonness of use between two or more departments. The review that has gone on with a task force of the departments in that area has now increased that to something over 80 percent commonness, where there was purely makes and models, and it was not so difficult to recognize in the original descriptive pattern.

Now, to me that is an important form of standardization which is not necessarily the result of technical development, but some of our greatest areas are going to be on actual design, where actual design has to take place, and where you will be working with industry to accomplish that.

Mr. HOLIFIELD. And do they find a natural resistance on the part of industry from having any of their articles eliminated from the list?

Mr. LANPHIER. Yes. But, in general, industry has been very helpful in arriving at some form of standardization. Our biggest problem is the degree to which standardization restricts them from having some peculiar features and, generally, we run into the problem of spare parts and we are trying to eliminate the number of them—well, you will hear some of that in the course of this presentation, what has been accomplished.

There is no doubt that, to my mind, we have a great deal of make and model standardization that is not of a technical character, although it is a little bit technical in the sense of identifying when these two things were substitutable.

Mr. HOLIFIELD. Mr. Roback?

Mr. ROBACK. I would like to develop one point, Mr. Lanphier.

Theoretically, you could have a standardization office that would actually do standardization work and be centralized. Do you think it is more efficient to centralize or to parcel out this work among people in the services?

Mr. LANPHIER. I do not believe it would be practicable to have a central standardization office, and we particularly get into the technical fields, because it would be a matter of equipment, and the parceling out to the departments has been greatly dictated because of the facilities that they have available for carying out tests and carrying out development work.

Mr. ROBACK. The question I want to ask: Could you not have a special technical group in your office that would be in kind of a task-force capacity, going to the services and putting the finger on those items that ought to be standardized, and you might be able to find payoff items that ought to be standardized immediately. For example, you have troubles, and the records show that you have made no progress in the textile and clothing field, and yet that is a field where even though there are differences, it is much less difficult than when you deal with new electronic items or missile components; why could you not have a task-force group operating out of your office that would keep this program moving?

Mr. LANPHIER. Basically, that is what Mr. Dunn's function is, and his assignment of his staff to certain of these class areas is to monitor and pursue the programs we have laid out, and then we have assigned them to the department that has the facilities—or maybe, if we can identify the area of greatest interest, to take the chairmanship, with the other military departments being represented, to conduct the standardization studies.

Mr. ROBACK. And he is monitoring, he is studying the documents and he is getting progress reports, and he is discussing whether these programs are up to date or behind schedule.

Mr. LANPHIER. And where our greatest paydirt might be.

Mr. ROBACK. I am talking about a technical activity here through which you would be able to accelerate that program. For example, instead of putting first your time on locomotive accessories, you could be working toward getting shoes standardized, perhaps.

Mr. DUNN. If I might respond——

Mr. LAMPHIER. Yes.

Mr. DUNN. The skills required to do what you are suggesting, Mr. Roback, are not of a technical nature.

Mr. ROBACK. They may not be.

Mr. DUNN. They are not of a technical nature.

Mr. LAMPHIER. Of course, shoes are a beautiful example. They have been standardized within the last year from 500-some sizes to 128, and from 5 different colors to 2.

Mr. ROBACK. And the progress has been slight if it took 5 years.

Mr. DUNN. And we do not say locomotives are the only things that are being worked on in the program, by any means.

Mr. HOLIFIELD. One important question that I will ask: Are you in a position to direct your work in standardization to the paydirt areas, or is it a matter of, largely, initiation on the part of the service, that "this is the area in which we can do best at this time"?

Mr. LAMPHIER. We are in a position to direct where the paydirt areas are, and we do so direct.

Mr. HOLIFIELD. You do direct?

Mr. DUNN. We direct the program that we call the 1957, 1958, 1959 program, we take all the classes——

Mr. HOLIFIELD. We will want to know some examples of that and we will want to know if you only direct where you are asked to direct, or whether you exercise an objectivity in your Department as between areas to be covered.

Mr. LANPHIER. I may be overly optimistic, but I believe in Mr. Dunn's presentation here he will give you the answer to a number of your questions in a rather orderly manner; and if not, we certainly want to get them for you.

Mr. FASCELL. I had some questions, but in view of that, I will reserve my questions, because I was going to ask on the military right of waiver and settlement of disputes.

Mr. LANPHIER. Settlement of disputes we are making. I will answer that.

Mr. FASCELL. On individual items?

Mr. LANPHIER. We have made them on individual items.

Mr. FASCELL. In other words, am I correct in saying or inferring that statement presupposes that the Department of Defense can direct the standardization of a given item even though the military object to the removal of special benefits in that item for themselves?

Mr. LANPHIER. Yes; we could.

Mr. FASCELL. Have you done it?

Mr. LANPHIER. For instance, we had a dispute as to who would have the principal interest of monitoring Federal supply classes in the original allocation and there were some 22 of these which ended up that we could not get unanimous resolution and that decision was made in our office.

It is also made between certain types of individual items from time to time that come up where a resolution cannot be made. The final authority is there and is exercised clearly.

Mr. HOLIFIELD. Now, unless the committee dissents, why, we will excuse Mr. Lanphier at this time. We will ask you before you are excused, that is, if you have to leave according to your request before we started, would you expect Mr. Gay to answer on your behalf, the questions which would ordinarily be addressed to you?

Mr. LANPHIER. Yes, sir; Mr. Gay is very competent to do that.

Mr. RIEHLMAN. I am sorry to interrupt here, but I would like to ask the Secretary one other question. Would you want to say to the

committee or give to the committee some estimate as to when you feel this standardization program will be completed? Now, I know, I may say, that it probably will be a continuing program; but when will it be completed so that we will really and truly see the results of standardization?

Mr. DUNN. If I may, I will bring that out also. There are two terminal dates which we have set in this program and the sum total of them does not add up to a specific answer to your question in terms of completeness. But we have set terminal dates for the completion of simplification, for the development of all of these plans for standardization in this number of classes which is fiscal year 1961. And under the total number of plans for all the classes, we have set a terminal date of 3 years beyond that for completion of the simplification phase of standardization.

Mr. RIEHLMAN. 1964?

Mr. DUNN. Yes, sir.

Mr. RIEHLMAN. Do you agree with that, Mr. Secretary?

Mr. LANPHIER. Yes, sir.

Mr. HOLIFIELD. What do you mean by the simplification phase?

Mr. DUNN. Again you are anticipating some of the detail I have in my presentation.

Mr. HOLIFIELD. All right. We will hold back on that then until after Mr. Gay has made his presentation.

Mr. LANPHIER. And if the presentations result in some further questions that you would like to ask me, I would be very happy to come back.

Mr. HOLIFIELD. I feel sure that you can see that the committee is interested and will want to ask some more questions and we would like to have the privilege of calling you back if we feel we need you.

Mr. LANPHIER. Yes, sir. Thank you very much.

Mr. HOLIFIELD. At this time we will excuse Mr. Lanphier and we will hear from Mr. Roger Gay, who is the director of cataloging and standardization.

STATEMENT OF ROGER E. GAY, DIRECTOR, CATALOGING, STANDARDIZATION AND INSPECTION, OFFICE OF ASSISTANT SECRETARY OF DEFENSE FOR SUPPLY AND LOGISTICS

Mr. HOLIFIELD. Unless the committee objects, we will ask Mr. Gay to put in his report on the cataloging phase into the record at this point and we will proceed right on with standardization.

Mr. GAY. Fine.

(The report referred to is as follows:)

STATEMENT OF ROGER E. GAY, DIRECTOR OF CATALOGING, STANDARDIZATION AND INSPECTION, OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (SUPPLY AND LOGISTICS)

Mr. Chairman and members of the committee, it is my purpose this morning to provide you with a complete progress report on our operations in the Federal catalog system and the Department of Defense standardization program. I will cover with you our status, the progress we have achieved since last discussing these programs with you, and our future plans and schedules. I would like to devote the first part to the Federal catalog system.

As Mr. Lanphier has advised you, the identification phase of the Federal catalog system was completed in December 1956 and is now in a full state of

maintenance. By that I mean that the Army, Navy, Air Force, and Marine Corps and we in the Office of the Secretary of Defense reached a goal which we and our predecessors had been seeking for many years. This is the first time in the history of the Department of Defense that uniformity in the identifications of military supply items has been achieved. In completing the identification phase we not only have established the uniform identification for each item, but we have recorded in a central location the military activities which use each item, the manufacturers of each item and their part numbers, and master cross reference to all previous manufacturers' and Government drawing and part numbers. These data, required in the maintenance of the Federal catalog system, are valuable to the Department of Defense in the management of the military supply systems.

Our completion of this massive identification job is merely the signal for us to move into another important and continuing operation—that of maintaining the Federal catalog system for the future. By maintenance of the system we mean satisfying the day-to-day requirements of the military departments for new identifications, revisions to identifications, and withdrawals of identification data. As each of the military services converts to the exclusive use of the Federal catalog data, its day-to-day operational requirements dictate the timing which must be met by the Federal catalog system in full maintenance. Procurement, provisioning, distribution, maintenance, disposal and related functions must be supported by the catalog system within the time limitations established for these operations. Therefore, we must be capable of performing our total cataloging operations in terms of hours and days rather than weeks and months. When we declared the Federal catalog system in maintenance in December 1956, we had already developed modifications to procedures and facilities, which would guarantee a speed up in these operations. We guarantee the review and approval of item identifications and the assignment of stock numbers for new procurements in 10 working days.

The volume of data which will require processing in the Federal catalog system in maintenance is significant. We estimate that 600,000 "thought to be different" new items will be submitted this year by the military services for identification in the system. Through cataloging, it is expected that these will be reduced to approximately 250,000 to 300,000 actually different items to which new stock numbers will be assigned. In addition, we expect that approximately 150,000 items will drop out of the supply systems each year. These actions must also be recorded. We further expect several hundred thousand item identifications will require revisions each year as a result of standardization programs, engineering change programs and changing equipment maintenance requirements. These actions also must be reflected in the continuing maintenance operations of the system. We must further insure that the system contains flexibility and expansibility to provide uninterrupted and effective service in time of an emergency or mobilization or to meet additional management requirements. Therefore, although the catalog system is currently providing 10-day stock numbering service in maintenance, we have found it necessary to establish additional means of speeding up operations for the future. We will discuss these improvements later.

In addition to maintaining the Federal catalog system to serve the military supply systems, several other important related programs are in process. In establishing the program and schedules for the Federal catalog system in 1952, we concentrated on the millions of items in the supply systems of the Armed Forces. However, recognizing the value and advantages to be gained from having a uniform item identification language for both our supply and industrial systems we have completed programs and schedules for extending the Federal catalog system to all industrial production equipment owned by the Department of Defense. This equipment includes lathes, mills, grinding machines, punch presses, welding equipment, etc. In December 1956, we completed procedures and schedules for identification by June 1960 of approximately 600,00 items of industrial production equipment owned by the Department of Defense. This identification program when complete will provide a uniform name, identification, classification, and stock number for each different item of industrial production equipment owned by the Department of Defense whether in industrial facilities, maintenance and overhaul facilities, in reserves, or in the hands of private contractors. The successful completion of this new phase of cataloging operations will provide a management tool for our industrial system which will be equal in significance to the program we have just completed in military supply.

The second program is that of including civil agency items in the Federal catalog system. Public Law 152 for the General Services Administration and Public Law 436 for the Department of Defense directs the coordinated establishment of a uniform catalog system for the entire Federal Government. In this connection, we and the General Services Administration have developed a program and working arrangements for extending the Federal catalog system into the civil agencies of the Government. Under these operations, the policies, rules, procedures, and cataloging tools developed by the Department of Defense in cooperation with the General Services Administration are being used by the civil agencies. In addition, our central cataloging organization reviews, screens, and stock numbers all item identifications developed by the General Services Administration for civil agency items of supply. During fiscal year 1956, we processed and stock numbered 30,000 General Services Administration items. We are prepared to process approximately 65,000 such items during this fiscal year and are programing to process an additional 160,000 to be submitted by the General Services Administration in fiscal year 1958. These working arrangements between the Department of Defense and the General Services Administration will permit the orderly and effective extension of the Federal catalog system to all civil agencies of the Government with maximum efficiency and with a minimum of organizations. We are prepared to continue this close working relationship with the civil agencies throughout their scheduled program.

The combination of the operations involved in maintaining the Federal catalog system for the Department of Defense, plus the programs of extending the system into the industrial production equipment field and the civil agencies of the Government, provide a workload for our catalog system in the next several years which equals or slightly exceeds our requirements in meeting the scheduled identification phase for supply items in the last 2 years.

As we mentioned earlier, in the effective maintenance of the Federal catalog system we must be capable of providing identification and management data to the military supply systems within the time limits dictated by their operational requirements. In order to guarantee this volume and speed of service, it has been necessary for us to apply to the central operations of the Federal catalog system, the latest technological advances in the field of automatic data processing. On December 26, 1956, we completed the installation of an IBM 705 automatic data-processing system which will process those requirements in our system which we previously handled through electric accounting machines at the central processing office in New York. This facility when in full operation will permit us to reduce our processing time for over 50 percent of our identification requirements from 10 working days to 72 hours and will at the same time provide a satisfactory degree of built-in expansibility to guarantee the effective continuation of the catalog service in time of mobilization. We expect to complete the conversion of our electric accounting machine records to this automatic data-processing system and begin active operations by July 1, 1957. After approximately 3 months of operations in parallel with our central processing office, we will disestablish that office. This automatic data-processing system will greatly increase our ability to meet the requirements of the supply systems and our service to supply management at no increase in cost in our total operations.

This automatic data-processing system does not meet all of the central processing requirements. Approximately 1½ million of the total item identifications in our system are currently processed and filed manually. In this connection, in order that the Federal catalog system can provide 72-hour processing of all types of military items of supply in the future, it is necessary that we develop a means of mechanizing these remaining operations. To this end we have been working with industry and other Government agencies and anticipate that we will have the total central operations of the Federal catalog system under an automatic data-processing system or systems by the time all military activities complete conversion to Federal catalog data in December 1958. In addition to this automatic data-processing facility it is necessary that a rapid communications system for identification data be established between the departmental activities and our central cataloging organization. We are completing 1 year of study on this problem and at the present time an operational test of several new means of transmission is underway between our office and an Air Force supply activity. If this transmission test is successful, we will utilize rapid transmission facilities between the central cataloging office and those military supply activities which require such service. These

transmission facilities will reduce the current average of 14 days involved in mailing to 24 hours. The rapid transmission of data combined with the complete mechanization of the central operations of the catalog system will guarantee that any military activity can have a new item screened against all items in the Department of Defense and a Federal stock number assigned within 96 hours after requesting such action. This speed is necessary in future operations and will insure that the Federal catalog system will adequately serve the future day-to-day or emergency needs of military supply.

We have taken a significant step to relate the future resources necessary for our central catalog operations to the services required from the Federal catalog system by the military departments. Recognizing that cataloging is a service to the military departments, we provided for the financial support of the central cataloging operations under a management fund. Under this arrangement, the Army, Navy, and Air Force each year are contributing one-third of the total cost of the central cataloging operation and these funds are in direct proportion to the total services which must be provided to the military departments by the Federal catalog system. The organization and direct command responsibilities for the central operations of the Federal catalog system remain in the Office of the Assistant Secretary of Defense (Supply and Logistics) but the funding for this operation is a responsibility of the military departments. The Department of the Air Force was assigned the responsibility for acting as the financial agent and for providing administrative services to our central cataloging organization. The General Services Administration will contribute also to this management fund beginning in fiscal year 1958 for the cataloging services which it will receive from the Department of Defense. This management fund method of financing went into effect beginning with fiscal year 1957.

In past testimony before this committee we advised that the most effective and efficient means of publishing Federal catalog data throughout the Department of Defense was through a card-type catalog, selectively distributed to each military supply activity. This has been the means by which Federal item identifications have been published and distributed to date. From this card catalog each service obtains the uniform item identification data for conversion of its own publications, handbooks, manuals, etc., which are tailored to its specific needs. We did, however, advise that in those commodity areas having wide multiple usage throughout the military services and where sufficient uniformity of supply management existed, we would publish and maintain single-book-type Federal supply catalogs. The introduction of the single manager supply concept by the Department of Defense in the commodity areas of subsistence, medical and dental, clothing and textiles, and petroleum products has created conditions which justify the establishment and use of such single catalogs. Therefore, we have directed the development of single operational type supply catalogs in these single manager areas and their use wherever feasible throughout all operational levels to the exclusion of individual departmental catalogs for the same areas.

In summary, the development phase of the Federal catalog system is completed and all items currently in the supply systems of the Department of Defense have been identified under this system. We are in the midst of converting our central operations to the latest automatic data-processing systems incorporating rapid-transmission facilities to the military supply activities. We have programs underway for extending the Federal catalog system to all industrial production equipment in the Department of Defense. With the General Services Administration, we are in the process of extending the system throughout the entire executive branch of the Federal Government. Today, the Federal catalog system is an integral part of our day-to-day supply operations and each supply manager in the Department of Defense is rapidly becoming fully dependent upon this system for uniform item identification data. Our plans and programs for insuring that the catalog system meets the continuing needs of our day-to-day supply operations in the future make the next year or two the most critical period for the Federal catalog system. We guarantee that it will meet these requirements and we are dedicated to insuring its continued effectiveness in achieving maximum efficiency in our supply operations.

We are proud of our achievements to date and are confident their results will have far-reaching advantages to the future military stature of this Nation.

Mr. HOLIFIELD. You may proceed, Mr. Gay.

Mr. GAY. Mr. Chairman and members of the committee, one of the first real benefits stemming from the Federal catalog program was

its availability as a basic starting point for the development of a systematic and dynamic Department of Defense standardization program.

By late 1953, the classification system developed in cataloging became available as a basic tool for scheduling and programing our standardization assignments to the military departments. As a result of this, the Secretary of Defense, on October 15, 1954, issued Department of Defense Directive 4120.3.

With your permission, Mr. Chairman, I would like this directive to be part of the record.

Mr. HOLIFIELD. Without objection, it will be.

(Directive 4120.3 referred to is as follows:)

October 15, 1954
No. 4120.3

DEPARTMENT OF DEFENSE DIRECTIVE

Subject: Defense Standardization Program.

I. PURPOSE

This directive restates and clarifies the scope, purpose, and basic objectives of the defense standardization program and provides a statement of the principles and policies under which this program is to be prosecuted in consonance with other approved DOD programs.

II. AUTHORITY AND RESPONSIBILITY

The defense standardization program is conducted under the authority of the National Security Act of 1947, as amended, the Defense Cataloging and Standardization Act of 1952 and the Department of Defense Reorganization Plan No. 6 of 1953. Responsibility for the administration of such standardization is specifically assigned to the Assistant Secretary of Defense (Supply and Logistics) by DOD Directive 5126.1 of August 13, 1953. The collateral responsibility of ASD (Applications Engineering) will be coordinated under DOD Instruction 5126.4 dated March 12, 1954.

III. CANCELLATION

This directive supersedes DOD Directive 4120.3 February 2, 1953, Munitions Board memorandum dated July 21, 1949, titled "Military (MIL) Specifications Manual Policies and Procedures" and Munitions Board memorandum dated December 2, 1949, titled "Policy Governing Control of Procurement Under Approved Specifications" and any standardization instructions inconsistent with this directive or policies established herein.

IV. THE STANDARDIZATION PROGRAM

A. Scope

The standardization program is concerned with—

1. Standardization of material, components, equipment, and processes with respect to items and services approved for use by the Army, the Navy, and the Air Force.

2. Standardization of engineering practices and procedures essential to design, procurement, production, inspection, application, preservation, and preparation for delivery of items of military supply.

B. Purposes

The purposes of the defense standardization program are—

1. To improve the efficiency and effectiveness of logistical support, and operational readiness of the Army, the Navy, and the Air Force.

2. To conserve money, manpower, time, production facilities, and natural resources.

C. Objectives

The purposes of the defense standardization program will be realized by accomplishment of the following objectives:

1. Adoption of the minimum number of sizes, kinds, or types of items and services essential to military operations.
2. Achievement of the optimum degree of interchangeability of the component parts used in these items.
3. Development of standard terminology, codes, and drawing practices to achieve common understanding and clear interpretation of the description of items and practices.
4. Preparation of engineering and purchase documents to insure the design, purchase, and delivery of items consistent with the scope and purpose of the defense standardization program.
5. Providing the military departments with the most reliable equipment possible by the adoption of materiel which has been evaluated in accordance with established Government specifications and standards.

V. DEFINITIONS

For the purpose of the defense standardization program the following definitions will apply:

A. Standards

Standards are documents that establish engineering and technical limitations and applications for items, materials, processes, methods, designs, and engineering practices.

They will—

1. Limit the selection of materials, items, services, et cetera, in order to provide for—
   (*a*) Functional and physical interchangeability of parts, components, subassemblies, and equipments.
   (*b*) Compatibility of items and equipments in their own or related systems.
2. Establish basic engineering terminology and codes.
3. Limit the variety of end-use items which can be procured for stock and issue.

B. Specifications

Specifications are documents, intended primarily for use in procurement, which are clear, accurate descriptions of the technical requirements for items, materials, or services including the procedures by which it will be determined that the requirements have been met. Specifications for items and materials shall also contain preservation, packaging. packing, and marking requirements.

C. Handbooks

Handbooks are reference documents used in supply management operations which bring together under one cover general information, procedural and technical use data which are related to the standardization program.

D. Deviation

A change to specification or standard requirements, made prior to award of contract and detailed in the contractual document.

E. Waiver

A change to specification or standard requirements, made subsequent to award of contract, which may or may not be reflected in a change to the contractual document.

F. Item

As used in this document, the term "item" is a broad term and includes, but is not restricted to, equipments, components, and subassemblies.

VI. PLAN

A. In order to achieve the objectives of the program, the Office of the Assistant Secretary of Defense (Supply and Logistics) will assign to the military departments, after coordination therewith, responsibility for portions of the program.

The assignments will be consistent with departmental capacity and supply interest, with due regard to departmental mission. Assignment will be made—

1. For supply items, by classes in the Federal supply classification system.
2. For general engineering standards, by practices, processes, codes, standard terminology, et cetera, required for logistic support.

B. For each portion of the program assigned, the responsible military department shall develop a detailed plan for the achievement and maintenance of standardization in that area in collaboration with other interested departments. The plan shall include provision for appropriate work assignments, or reassignments to other departments, where appropriate. The initial efforts shall be directed toward the elimination of unneeded items currently in the supply system (simplification). The next step shall consist of an analysis of the remaining varieties, types, kinds, and sizes of items based on engineering criteria, needs, uses, military characteristics, and other fundamental factors. The purpose of this process is the further elimination of items or the development of new standard items to replace existing items. The plan shall include full consideration of industry practices and shall insure coordination with appropriate segments of industry. Detailed plans so developed shall provide for the following:

1. Methods for achieving simplification in each assigned area to eliminate varieties excess to current or planned requirements.
2. Development of standards and specifications for items, materials, equipments, and services concurrently with, or apart from, simplification actions.
3. Development and preparation of all necessary engineering standards.

C. The plan for standardization developed pursuant to assignments shall include the necessary procedures by which the standardization is to be achieved. These procedures shall insure that the essential requirements of all services are accommodated in the standardization achieved. These procedures may provide for the achievement of standardization by an individual military department, by joint task groups, or, in the case of commodities where the art is rapidly developing, through the use of standing committees. It is expected that departments will give members of such task groups and standing committees a reasonable latitude to resolve issues in committee in order that departmental concurrences will be expedited. Where practicable and desirable, industry advisory committeees will be established to assist in standardization.

D. The determination as to the desirability of, and the priority of, standardization projects will be made on the basis of resulting identifiable benefits. Therefore, a factual evaluation of benefits to be derived from the standardization project will be made before the project is undertaken. These benefits will be balanced against the cost of completing the project, and its initiation and priority determined accordingly. It is recognized that benefits and costs may not lend themselves to dollar measurement. Appropriate values shall be assigned to non-dollar benefits and costs. In assessing the benefits to be derived from standardization, consideration consistent with other approved DOD programs and policies will be given to the degree to which standardization contributes to—

1. Facilitating the determination of logistics requirements.
2. Facilitating procurement through—
   (*a*) The consolidation of purchasing requirements.
   (*b*) Increasing sources of supply.
   (*c*) Establishment of the appropriate level of performance.
   (*d*) Improvement of design and producibility of items of supply.
3. Improving logistic support.
4. Providing significant logistic or engineering benefits or dollar savings.
5. Facilitating interdepartmental cross servicing.
6. Reducing distribution and maintenance costs.
7. Saving of materials on the DOD conservation list.

E. Programs developed by the military departments pursuant to assignments of responsibility shall be submitted to the OASD (Supply and Logistics) for review and shall be carried out in coordination with all interested departments in accordance with the plans submitted.

F. Differences among the military departments in any phase of the program, which cannot be reconciled by the assigned department, will be referred to OASD (Supply and Logistics) for resolution.

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VII. GENERAL STATEMENT OF STANDARDS AND SPECIFICATIONS POLICY

Federal and military specifications and standards in the Department of Defense shall be governed in their development, preparation, and use by the following:

A. General

1. *Specifications.*—Specifications prepared by the military departments shall be issued in either the Federal or military series. Existing departmental, bureau, or service specifications are authorized for use in production and procurement. However, they will be converted to the Federal or military series or canceled by July 1, 1955.

2. *Standards.*—Effective 6 months from the date of this directive, all new standards prepared by the military departments shall be issued in the Federal or military series. Existing standards not in the Federal and military series will be integrated into the defense standardization program by conversion to one of these series under a planned program designed to minimize cost and permit an orderly transition. The development of this program will be coordinated by OASD (Supply and Logistics) with the departments.

B. Preparation and coordination

1. Federal and military standards, specifications, qualified products lists, and standardization handbooks shall be prepared, coordinated, and implemented in conformance with approved Federal and DOD policies, regulations, instructions, and procedures.

2. Except as indicated herein, Federal and military specifications shall be prepared for procurement of items to be repetitively stored and issued in the military supply systems, and shall include provisions for preservation, packing, packaging, and marking in accordance with DOD Directive 4100.14, February 27, 1953. Federal and military specifications need not be prepared (or used) for the following:

(*a*) Purchase incident to research and development,

(*b*) Purchase of items for test or evaluation,

(*c*) Purchase of laboratory test equipment for use by Government laboratories,

(*d*) Purchase of items for authorized resale except military clothing,

(*e*) Purchase of items in an amount not to exceed $1,000 (multiple small purchases of less than $1,000 of the same item shall not be made for the purpose of avoiding the intent of this exception),

(*f*) Purchase of one-time procurement items,

(*g*) Purchase of items for which it is impracticable or uneconomical to prepare a specification (repetitive use of a purchase description containing the essential characteristics of a specification will be construed as evidence of improper use of this exception),

3. A purchase description may be used for procurement of items, materials, and services covered by the above exceptions.

4. Specifications normally will be prepared and used regardless of dollar volume of anticipated procurement when required to meet one or more of the following conditions:

(*a*) Protect the health and insure the safety of personnel using or handling the item,

(*b*) Assure required interchangeability.

(*c*) Assure the minimum quality level required for adequate performance,

(*d*) Assure the incorporation of necessary military characteristics.

C. Relationship to the Federal standardization program

Standardization involving materials, items, and services common to the Department of Defense and at least one civilian agency will normally be coordinated with the civil agencies of the Federal Government and will be reflected in Federal specifications and standards. However, all standardization effort within the Department of Defense shall be integrated, planned, and conducted in accordance with procedures and schedules established by the OASD (Supply and Logistics).

D. Mandatory use of specifications and standards

Coordinated Federal and military standards and specifications approved for use by the DOD are mandatory for use in the design, selection, and procurement

of the items, materials, or services so covered. Excluded from this requirement are existing coordinated Federal and military standards and specifications, developed under policies permitting voluntary exemption by the military departments. These documents shall be scheduled for revision under plans developed by OASD (Supply and Logistics) in coordination with the departments.

1. *Standards.*—Each military department will establish procedures to insure the use of coordinated standards and to insure that waivers or deviations are authorized by competent authority. Authorized waivers and deviations to standards will be reported periodically to the Assistant Secretary of Defense (Supply and Logistics) in accordance with separate instructions. When repeated deviations or waivers are found necessary, action to revise the standard will be taken in accordance with established procedure. Where it is determined that a standard is no longer required, action leading to its cancellation should be taken in accordance with established procedure.

2. *Specifications.*—Except as noted above (secs. VII–B and VII–D), coordinated Federal and military specifications are mandatory on all activities of the Department of Defense for use in procurement either by formal advertising or negotiation, and, as appropriate, in design. The military departments shall establish procedures to assure—

(*a*) That these specifications are used,

(*b*) That justification for deviations or waivers therefrom are subjected to competent review before authorization,

(*c*) That when repeated deviations or waivers are found necessary, action to revise or amend the specification be taken in accordance with established procedures,

(*d*) Each new item acquired by the military departments shall be immediately submitted for inclusion in the standardization program in keeping with section IV–C–1 of this directive.

VIII. COMMERCIAL ITEMS, INDUSTRIAL STANDARDS, AND THE NEED FOR FLEXIBILITY IN CHANGING SPECIFICATIONS AND STANDARDS

In the development of Federal and military specifications and standards, commercial end items and component parts will be used to the maximum degree practicable. Commercial items will be adopted without modification unless such procedure will not satisfy military requirements such as performance or interchangeability as determined by competent authority. When commercial items are available, reasons for unsuitability for military use shall be made a part of the record of the project development.

Nationally recognized industry and technical society standards and specifications shall be used to the maximum extent practicable in the development and design of materiel and in the preparation of military and Federal standards and specifications. This policy will permit the maximum conservation of engineering effort within the Department of Defense and, at the same time, assure that the requirements of the Department of Defense are successfully geared to existing industrial practices and resources.

Standards and specifications, at the time of issuance, shall prescribe requirements reflecting the existing stage of technological development and current industrial practices. Changes are to be made whenever warranted by technological and scientific progress, by experience in production or use, or by materials shortages. Under this policy, standards or specifications shall not be construed as inalterable, and shall be designed to permit unrestricted technological development or improvement of design.

IX. COORDINATION WITH INDUSTRY

The department developing standards and specifications shall assure that adequate coorination has been effected with those sections of industry concerned, including potential new suppliers, where appropriate. The impact of the proposed standardization upon the ability of industry to produce in the quantities required must be assessed before final decision to standardize is made. Also, advantage can be taken of industry suggestions for improvement through application of the latest technological advances. It is essential that the industry be aware, at an early stage, of the changing requirements of the Armed Forces and be given an opportunity to evaluate the proposed change in the light of technical soundness; foreseeable costs or procurement delays; need for retooling; new processes or techniques required; training of the labor forces; and the effect upon full and free competition.

Coordination shall be accomplished with a representative cross section of industry, including a proper distribution by geography and size of business, and including both trade association members and unaffiliated companies, and, where appropriate, trade associations, technical societies, and other standardization organizations.

X. ORGANIZATION

Each military department shall establish the necessary organization required to carry out effectively its responsibilities under this program. Since military supply standardization and engineering standards affect design, development, procurement, cataloging, distribution, use, and maintenance of items of military supply, the responsible organizational unit shall be designated at a level of authority adequate to insure effective coordination and management of the standardization effort. This organizational unit shall be so organized and staffed as to effectively implement, for its department, delegations of responsibility for standardization by OASD (Supply and Logistics) in accordance with the principles of this directive.

Responsibilities assigned to this organizational unit should include—

1. The coordination of the standardization efforts of the services, bureaus, and commands.
2. Assistance in the establishment of adequate budgets and staffs for standardization operations and the integration of departmental and Department of Defense standardization.
3. Development of departmental policies and procedures to assure the development and use of standards and specifications in accordance with this directive.
4. Development of departmental policies and procedures for monitoring departures from standards and specifications.
5. Prevention of overlapping and duplicating specifications and standards.
6. Maintenance of the official channel of communication between its department and other departments and the Office of the Assistant Secretary of Defense (Supply and Logistics) with respect to the defense standardization program.

In addition, each military department shall furnish one member and alternate to serve as an adviser to the staff director, Standardization Division. Office of the Assistant Secretary of Defense (Supply and Logistics) in the development of the defense standardization policies, program, and procedures.

XI. REPORTS

The military departments shall report progress under this program in accordance with Public Law 436, 82d Congress, and the instructions contained in DOD Instruction No. 4120.1, dated May 7, 1954.

XII. IMPLEMENTATION

The provisions of this directive are effective upon receipt. Each military department shall implement the substance of this directive as soon as possible and insure the instruction of all elements and levels of responsibility concerned in the content, intent, principles, and objectives of this program. Copies of implementing policies and procedures will be provided to the Office of the Assistant Secretary of Defense (Supply and Logistics) as they are issued.

C. E. WILSON,
Secretary of Defense.

Mr. GAY. A copy of this directive is submitted for your record. This directive is a major achievement because for the first time it gives to the military departments specific guidance for a comprehensive program and establishes the basis for tying this program to identifiable benefits.

It recognizes that standardization in the Defense Department must be more than an engineering exercise. To be most effective, standardization must contribute to improved logistics support as well as to conservation of money, manpower, natural resources, and production facilities.

The accelerated defense standardization program recognizes several considerations fundamental to its successful implementation: (1) The Office of the Secretary of Defense must manage the program and provide for operational responsibilities in the military services which have the technical capacity; (2) the performance of the military departments must be improved through clearer delineation and assignment for all technical operations; (3) the limited approach to standardization utilized in the past must be abandoned for a more systematic and comprehensive analysis of all categories of equipment and supplies listed in the Federal catalog system; (4) in addition to overall planning for achieving standardization, specific programs must be planned for each fiscal year; and (5) policies and procedures must be developed which will insure that standards and specifications are used in the design, procurement, and maintenance of material.

The directive of October 15, 1954, laid the foundation on which this accelerated defense standardization program can be pursued. I would like to impress on the committee the fact that the magnitude of the program contemplated and the diversity of existing approaches to standardization have necessitated an intensive campaign of indoctrination which has been carried on by the staff of the Assistant Secretary of Defense (Supply and Logistics). Basic policies as contained within this document are directed toward achieving the following objectives:

1. Adoption of the minimum number of sizes, kinds, or types of items and services essential to military operations.

2. Achievement of the maximum degree of interchangeability of the component parts used in these items.

3. Development of standard terminology, codes, and drawing practices to achieve common understanding and clear interpretation of the description of items and practices.

4. Preparation of engineering and purchase documents to insure the design, purchase, and delivery of items consistent with the scope and purpose of the defense standardization program.

5. Providing the military departments with the most reliable equipment possible by the adoption of materiel which has been produced in accordance with established specifications and standards.

Mr. HOLIFIELD. Would you pause at that point, Mr. Gay, and give us just a brief detailed explanation of those five? Some of them are self-explanatory and others need a little explanation.

Mr. GAY. I wonder, Mr. Chairman, if——

Mr. HOLIFIELD. Will the rest of the presentation do that?

Mr. GAY. Mr. Dunn's full presentation will cover much of that, and I think the questions could better wait until after that, sir.

Mr. HOLIFIELD. All right, proceed.

Mr. GAY. The directive also includes a plan for achieving these objectives. The plan provides for assignment of responsibility for standardization to the military departments on the basis of Federal supply classes. It holds the military departments responsible for achieving and maintaining standardization within the areas of their assigned responsibility. It also requires that an adequate organization be established within each of these military departments to assure fulfillment of the objectives as established by the directive.

The administrative and management problems of the standardization program have paralleled those of the catalog program but the basic natures of these two functions are different. Cataloging involves a reflection of what exists in the supply systems. The catalog data serves as a tool for standardization. The standardization effort, however, involves engineering, procurement, distribution, transportation, industrial, and economic considerations which go far beyond the type of activity in which we engage when we catalog. Standardization necessarily is a matter of degree rather than one of final accomplishment. We hope that you will measure the program in this light.

After the enunciation of basic policies of the program as found in DOD Directive 4120.3, the next job was to divide up the work. The assignment of standardization responsibility to the military departments for somewhat over 500 Federal supply classes was completed by June 1955. A directory of class responsibility is submitted herewith and made a part of the record.

With your permission, Mr. Chairman, I would like to give a copy of this for the record.

Mr. HOLIFIELD. Without objection, received.

(The directory referred to appears in the appendix as exhibit A.)

Mr. GAY. The next step is the review of all items in the military supply system, based on the catalog data, to determine where standardization is profitable. This is being accomplished by the development of fiscal year programs scheduling certain Federal supply classes for such review. Programs have been established for fiscal year 1957 and fiscal year 1958. These cover some 230 classes. Copies of these programs are also submitted.

With your permission, Mr. Chairman, I would like to present these for the record.

Mr. HOLIFIELD. Without objection, received.

(The documents referred to appear in the appendix as exhibits B and C.)

Mr. GAY. It must be emphasized that the scheduled dates for the fiscal year programs and the guidelines are applicable only to the preliminary review to determine where standardization is profitable. Only after such a determination is made will specific standardization work be scheduled and undertaken. Budgetary support through reprograming has been provided for this review. Guidance for scheduling the remaining Federal supply classes for review has been furnished the military departments.

Progress has not always been a simple matter. Problems have been numerous and difficult. As in any pioneering endeavor, many problems will have to be solved as the program progresses. The implementation of the use of specifications and standards in the design and procurement of items so as to act as a screen to preclude unneeded new items from coming into the system will require much additional careful planning. Currently, in order to obtain support for the fiscal year work schedules, reprograming of departmental resources is necessary. It is expected that the fiscal year 1959 work schedule program will be budgeted for in the normal cycle, and some of the problems stemming from necessity to schedule support by reprograming will be dissipated. Like industry, and in direct competition to industry, we are faced with the need to recruit competent technical

staff. Not only does industrial competition make recruitment difficult, but even when engineering personnel are recruited, they must be provided with considerable training before they are fully productive in the professional work of standardization. We are keeping a close watch by means of a recently instituted reporting system on the progress of recruitment for this program. I cannot close my discussion of the problem areas without mentioning the use of industrial standards. It is a policy of the Department of Defense to make maximum use of nationally recognized industrial standards.

In this effort, we have the full concurrence of the three military departments. However, before a nationally recognized industrial standard can be used effectively, a determination of its adequacy to meet the requirements of the military must be made. Studies are currently under way to see whether methods other than those now in use can be established to extend the use of nationally recognized industrial standards. We are working closely with representative groups of industrial standardization bodies on this problem.

While our major effort has been and will continue to be directed toward the establishment of a system in terms of comprehensive programs to be accomplished by the military departments under assigned class responsibility, one of our basic problems is to mesh the existing standardization program which has been conducted on a limited basis into the overall program without losing any of the benefits already available.

As an example of the notable results of the program since the enactment of Public Law 436, the total number of items eliminated is approaching the half million mark. During the same period, over 8 million cubic feet of space and 1 million man-hours have been reported as saved. In addition, estimated total savings of over $110 million has also been reported.

Progress has also been made in the establishment of uniform packaging, packing, and preservation requirements. Department of Defense Instruction 4100.14, issued July 20, 1955, established three standard levels of military preservation, packaging, and packing, thus permitting the procuring activity to select the most economical level for a particular application.

I can assure you that the patience and understanding of this committee and the time which it devoted to the cataloging program were substantial factors in the great progress which has been made in that area. We feel confident that your sympathetic understanding and support of our standardization program will likewise prove a significant contribution to national defense and economy.

Present with me today is Mr. John Dunn, Staff Director for Standardization. He is prepared to outline to you the details of the defense standardization program.

Mr. Dunn has a presentation which I am sure will answer many of the questions which are in your mind. That concludes my formal statement.

Mr. HOLIFIELD. I believe we will withhold questions from you at this time and let Mr. Dunn start on his presentation.

I understand there will be a vote in the House at about 12:30, and if the Committee wants to stay with us a little while we will get into this—well, what is the pleasure of the committee?

(Discussion not recorded.)

Mr. HOLIFIELD. All right, Mr. Dunn, you may start on your presentation.

STATEMENT OF JOHN J. DUNN, STAFF DIRECTOR, STANDARDIZATION DIVISION, OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE FOR SUPPLY AND LOGISTICS

Mr. DUNN. Mr. Chairman, I have a series of charts that I will speak from. This presentation as it was timed yesterday should consume just about an hour, and I will try to adjust it in some measure to respond to some of the questions which have been raised thus far that were not covered when this was planned.

It is divided into five major subjects, as suggested on this first chart.

I want to talk initially about the nature and function of standardization so our discussion will be carried on in a common frame of reference. Then I would like to detail the status of and the atmosphere in which standardization was carried out in the Department of Defense at the time Public Law 436 was enacted.

And then I would like to enumerate some of the major actions which were taken by the Department of Defense to implement this law.

Having done that, I will talk a little bit about some of the techniques employed in the standardization function and then rehearse with the committee the present status of the program.

Getting into what is the nature of standardization: Standardization, in its generic sense, is an agreement among the people who have the knowledge on a preferred solution to a repetitive situation. Obviously, the more often the situation repeats itself, the greater the value for having a fixed solution to it. The economics of the standardization process are very simple. Situations which are repetitive should not require the time for the development of an individual solution each time they present themselves. The creation of a standard, therefore, saves the time—in the case of supply and equipment, saves the time of the design engineer and provides for a solution of problems for which existing knowledge has already provided a solution. And this document to establish the solution must be developed and organized in the same manner as you codify statutes for ease of reference in the legal business.

Now, the nature of any standardization program is conditioned by its motivation. This chart suggests, for example, that the motivation industry has for standardization is to achieve the advantage of lower cost of production or some advantage, perhaps in the competitive market. They have the interest of the producer, if you like, in standardization.

The interest of the Department of Defense is the interest of the consumer.

The cost of having in our supply system and managing the equipment and supplies far exceeds, in most cases, the cost of procuring the item. The costs of receiving, storing, issuing, inspecting, repairing, maintaining, overhauling, all of those costs are greater, normally, than the initial cost of the item itself. And it is the improvement of supply management, where these costs occur. As set out in the preamble of

Public Law 436, that provides the motivation for the Defense Department standardization program—to make more economical and more efficient the performance of the supply function with respect to equipment and supplies used by the military.

These are the essential elements of any standard, on this chart. In the case of the Department of Defense it is necessary that the essential requirements of all of the users within the Department of Defense be reflected in whatever standards are developed.

Obviously, if the requirements of all users, and I underline the word "essential," the essential requirements of all users are to be included in the standard, they must be coordinated among the people who have this kind of interest, and there must be agreement on the content of standard.

This is, generically, the character of any standard, whether we develop it or industry or anybody else. There is this additional characteristic within the Department of Defense with respect to standards developed within the Department of Defense, in which, as has been suggested in the earlier testimony, the Secretary of Defense does direct agreement on standards where the military departments have not reached agreement. And this is a matter of direction not only with respect to the content of standards but with respect to any procedural policies or plans connected with the development of standards.

Since standards are essentially a current reading of the state of the art, obviously, they do not remain static. They change. Improvements are made. Technology advances, and our documentation must be current with it, so that they must be appraised periodically to make certain we are current with the existing state of the art.

Mr. HOLIFIELD. Isn't it true that the rapid advance of technology makes the task of standardization doubly difficult in our system?

Mr. DUNN. That is so, sir.

Mr. HOLIFIELD. And what success do you have in retiring objects which have heretofore been considered standard, and replacing them with improved standardized articles?

Mr. DUNN. Are you asking for a statistical measure of our success, or generally whether it is a difficult job?

Mr. HOLIFIELD. Generally.

Mr. DUNN. Well, that is the normal function of standardization, and it is not a new job in its nature, if that answers the question.

The state of the art is a basic consideration. The point that this chart is intended to convey is that standardization in a finite sense is never complete, because both the state of the art and the requirements of the military are constantly changing. So that in the determination of what is a sound and wise standard, these are the elements which must be balanced against each other: What are the requirements, and with respect to those commodities, what is the state of the art? Is it in an area where knowledge is pretty well established and stabilized, or is it in an area where there are rapid improvements in technology? For example, in the electronic field things are moving awfully fast and our requirements are pressing hard the state of the art. In that kind of a situation there is a hazard in making standards. Whereas in the mechanical arts, for example, where knowledge is well stabilized in those areas standards are particularly fruitful.

Again, how feasible is it to reduce the variety that you have? You have to consider that, with the existing tooling, what is it going to cost you to achieve your reduction in variety, and is it going to be a cost which is commensurate with the benefits that you will get from that reduction in variety?

Those are the elements which have to be balanced out in determining what is a satisfactory degree of standardization.

This brings us to the point which was touched upon earlier. In order to make these kinds of judgments, what is required is mature professional engineering judgments, tempered with understanding, in addition, of the requirements and costs in the military, to have in its system this great variety of items. This is not a cataloging job.

So much, then, for the nature of standardization. I would like to touch for a minute on the condition of standardization at the time Public Law 436 was passed, how it was carried on in the Department of Defense.

The effort in the Department of Defense at that time was a very limited effort. It consisted totally of individual projects with respect to a single item, or perhaps a group of items, and largely in the field of what I will describe later as engineering standards. And there was little focusing of the effort on the improvement of supply management functions generally, if I can make that point. The emphasis was primarily on the development of these standards of an engineering character, plus a great variety of projects for the development of specifications, which is a separate kind of activity. That was one of the basic conditions that was found.

Several others are suggested in this chart. There was no integrated plan by which the total effort of all the people engaged in standardization was directed towards a generally understood objective.

These individual projects, that is, provided a solution, perhaps, for a problem that an individual engineer had somewhere, but whether it contributed to the improvement of the management of supply or reduced the variety of items we have to handle in many cases was open to question.

There was a need for Department of Defense-wide policy reflecting generally the content of what I have described earlier, so that all of the people engaged in it would have uniform guidance as to what they were expected to accomplish through standardization.

The budget support was even more uncertain than it is today.

As we have suggested earlier, the people doing this work have primarily assignments in other functions of supply, and it was possible for them to plead, "Well, I haven't time to do this now, I have to do my principal job," and no mechanics had been established in the Office of the Secretary of Defense which would prevent that kind of a situation from arising.

Further, there was a diffusion of responsibility between the Secretary of Defense and the military departments by virtue of the methods employed. It was practice to assign responsibilities to task groups consisting of representatives from the military departments and a chairman from the Office of the Secretary of Defense. And in that situation it was never clear who was carrying the responsibility, the chairman who came from the Office of Secretary of Defense or someone from the military departments who had all of the technical knowledge.

So, progress was frequently only achieved by the main might of the individual from the Secretary's office pushing those things.

It was an unsatisfactory division of labor, and there was no system by which we could measure what kind of activity and what degree of achievement was actually being performed. These were rather serious deficiencies, in our view.

Now, having analyzed it and having taken an inventory of how well we were doing the standardization program and how responsive it was to Public Law 436, it was quite evident to us that what was needed was a complete reorientation of the effort, and the next section of my presentation touches on the major actions designed to bring about this reorientation.

Mr. Gay mentioned in his brief statement that Mr. Wilson did issue a directive in 1954 which outlined the basic concept, the basic policies, and the principles by which this program would be pursued by all military departments. This document constitutes essentially a doctrine of standardization within the Department of Defense.

Mr. ROBACK. What was the difference between that and the 1953 directive that was issued?

Mr. DUNN. There were a number of differences, and I would have to have the 1953 directive before me to be specific.

The 1953 directive lacks specifics. For example, as to how it was proposed to achieve the objectives which are defined in the directive, that is a specific illustration; how we were going to go about it, and what kind of responsibilities were assigned to the various people. It, in addition, was silent on some very important, in terms of detail, some very important basic policies for this program.

Mr. ROBACK. The authorizing legislation was passed in July 1952, and this directive was October 1954.

Mr. DUNN. Yes, sir.

Mr. ROBACK. So there was a considerable period of time there you really did not have a statement of doctrine or directive from the Department of Defense.

Mr. DUNN. Yes.

And, of course, the period was greater than the period you have identified. It extended back many years before that, which is a point I made earlier.

Since this does constitute the foundation on which this program is being constructed, I would like to touch on the basic important provisions of it just for a minute.

The scope of the program is coextensive with the scope of the cataloging program. We intend to look at all three-million-odd items in the supply system.

The purpose, of course, is to improve the efficiency and effectiveness with which the various supply function activities go forward, with the objective of reducing the variety of items and services required to support our fighting forces.

This directive outlines the basic plan by which these objectives will be attained, and it indicates that responsibility for portions of those 3 million items will be divided among the military departments on the basis of whole classes of supply as they were developed in the Federal cataloging program under the Federal classification system. That is one kind of responsibility being assigned under the program.

The second type of responsibility is the responsibility for engineering standards which, while they affect items, are not limited to items in a given class but affect items across a number of classes. Those kinds of responsibilities, those kinds of standards will be separately assigned in addition to responsibilities for classes of commodities.

The directive identified the responsibility of the military departments in connection with portions of the program assigned to them, in that they would be required when it was timely, to look at the class they were responsible for, to develop in coordination with the other two military departments a detailed plan which would rehearse the precise mechanics by which they proposed to achieve the proper degree of standardization in that class, not only with respect to the items but with respect to whatever engineering standards were required for that class, as well.

This plan must give evidence that the entire class is covered in their plan, and it must contain a schedule of what they propose to do in the first 3 years. It must be revised annually to reflect progress and future plans as the work develops.

In addition, the means by which coordination is going to be achieved, likewise must be identified in this plan.

The Department of Defense Directive 4120.3 established the criteria by which priority of attention standardizationwise could be set; essentially what it says is that those projects which give promise of giving the greatest contribution to simplifying the management of supply will receive the highest priority.

Mr. ECKHART. Mr. Chairman, in view of that statement, Mr. Dunn, how can you explain the four detailed plans that the chairman mentioned or referred to a few minutes ago, locomotives, locomotive accessory equipment, and chemical weapons?

Mr. DUNN. Well, if you want to measure the soundness of this policy against what is planned in terms of work, I don't think it is reasonable to select four out of a fiscal year program to measure the soundness of that policy because there are many factors, as I suggested, which were considered and integrated in the development of this program.

I have the program in my hands here, and I find screws, bolts, nuts, washers, rivets, and so on, identified in this plan. I find electron tubes, resistors, connectors, and many other common-use items in this first fiscal year.

Mr. HOLIFIELD. As I understand, there have been only 10 detailed plans completed and approved by the Department of Defense. Is that right?

Mr. DUNN. Yes, sir.

Mr. HOLIFIELD. And that four of them that I have mentioned—I mentioned them because I could not see where they were of real procurement importance——

Mr. DUNN. Yes.

Mr. HOLIFIELD. Either as to the number of items to be procured or the number of dollars to be expended.

Mr. DUNN. Yes.

Mr. HOLIFIELD. So, what are the other six that have been detailed and approved?

Mr. DUNN. I would have to check that, sir, if I may.

Mr. HOLIFIELD. I would like to get them, in all fairness.

Mr. DUNN. Sure.

All I am trying to suggest is this, that various classes vary in their complexity and in the problems associated with developing plans for standardization.

Those things are taken into consideration in scheduling the time by which plans must be submitted.

It is quite possible, for example, that the development of a plan for railroad cars is a relatively simple matter, and if it were, obviously, the people who were exclusively available to work on that program could do so in an orderly, timely manner, and obviously have done so.

Mr. HOLIFIELD. We are not objecting to that, and we only want to judge the progress you have made by the importance of the detailed plans which have been approved.

Mr. DUNN. Well, let me list the ones approved.

Mr. HOLIFIELD. All right.

Mr. DUNN. Chemical weapons, locomotives, locomotive accessories, track materials, rocket engines—this one is simply—has been submitted without Navy comments which you will have shortly—adhesives, gasoline and jet fuel, wire, nonelectrical—is that the total list—well, these are the ones that are approved; is that right?

I am informed it is.

Mr. FASCELL. Isn't it true that obviously the criterion that was used in setting up these plans was, "Well, these are the ones that we can easily complete at the start of the program to show some effort, work and accomplishment, and we can get on with the tougher ones as we establish better priority"——

Mr. DUNN. No. Or at least if it were the criterion, I am not conscious that it was employed.

Mr. FASCELL. I am not saying there is anything wrong, but it appears to me to be so.

Mr. DUNN. No. These are happenstances, these beginnings——

Mr. HOLIFIELD. As a matter of fact, gasoline, jet fuel—has not the work of standardization on those been pretty well done?

Mr. DUNN. The stage of standardization could very well contribute to priority, as you suggest.

Mr. ROBACK. What documentary evidence is there that this conceptual process of priority effort has been translated into any kind of action?

Mr. DUNN. The document which I submit as available is the fiscal year program for 1957, and I suggest some of the very common-use items——

Mr. ROBACK. In other words, you are contending that in 1957 some of these payoff items will begin to appear; is that what you mean?

Mr. DUNN. Yes, sir. Yes, indeed.

Mrs. GRIFFITHS. I am sorry, Mr. Chairman, but I must leave now.

Mr. DUNN. These plans, as you know, of course, are approved by the Office of the Secretary of Defense and, again, the policy of resolving differences among the military departments is restated in this directive.

Mr. HOLIFIELD. Before we leave that, how many plans do you think will be approved in addition to the 10 already approved this year?

Mr. DUNN. The schedule—and this is subject to correction—I think calls for 65 for this year. How many will be approved—we are sitting and studying now, we are continuously in session this week with the military departments to see if we can get a fix on that. My guess is that it is not going to be 65.

Mr. HOLIFIELD. And can you submit for the committee's records what those 65 areas are planned to be?

Mr. DUNN. Yes.

The committee staff already has this, Mr. Chairman, but I will be glad to resubmit it.

Mr. HOLIFIELD. That is all right, if we have them.

Mr. DUNN. Yes.

Mr. Gay tells me he submitted it in connection with his statement. (See schedule for fiscal year 1957, appendix B.)

Mr. HOLIFIELD. All right; fine.

Mr. DUNN. Other major provisions of this basic directive relating to the program relate to the requirements that standards and specifications developed under it are mandatory for use. That is, the limitations prescribed by these documents must be adhered to in the design of new equipment and the procurement and management of inventory.

It states the policy we shall use commercial items to the maximum feasible extent whenever they meet our requirements and, correspondingly, that industrial standards which meet our requirements likewise will be adapted for our use without the expenditure of engineering resources to create such standards.

Mr. HOLIFIELD. Do you or do you not find a great deal of that has been done?

Mr. DUNN. The adoption of industrial standards?

Mr. HOLIFIELD. Yes, such as SAE standards.

Mr. DUNN. We find about 1,000 standards are referred to in our various documents, so that we use SAE, ASTM, and——

Mr. HOLIFIELD. Is that 1,000 standards for 1,000 separate items?

Mr. DUNN. It might be items, or it might be test methods, a great variety of things for which standards exist.

Mr. ROBACK. What controls do you have to prevent industrial standards being written around industrial proprietary products?

Mr. DUNN. I am not sure that there exist any industrial standards describing proprietary products.

Mr. ROBACK. Not describing them, but some of them are to the effect that the application of the standards will be a specification which would exclude some items and favor some companies.

Mr. DUNN. I would like to know of an instance of that character in industrial standards, because it does not gee with my understanding in developing standards at all.

Mr. GAY. They would not exist.

Mr. FASCELL. The only thing that might exist is a military specification written for a particular product.

Mr. DUNN. Well, that was not his question.

Mr. FASCELL. I understand.

Mr. ROBACK. May I ask you this question: Is there a standardization program for machine tools?

Mr. DUNN. A standardization program—well, there is a class of machine tools for which a detailed plan of standardization will be developed in accordance with whatever the schedule is for that class. There is no plan in my hand at the present time, if that is the answer to your question.

Mr. GAY. The industrial standards, Mr. Chairman, in the field of machine tools involves things like colors and paints, colors and shades of paint standards to be used by the machine tool industry. They do not go beyond that in the field of machine tools.

Mr. DUNN. Electrical connections, too.

As I said, this directive spells out the policy that all elements of the departments must use these documents. I guess I have been through that.

I think an important—coordination of these documents is highly important—that is, our documents, specifications, must be coordinated with those segments of industry which are affected by them. We must know that what we are producing is consistent with available tooling in industry.

Mr. ECKHART. Might I interrupt, so that we may make this record clear?

Where you have referred to the last chart, if you would read it so the reporter will have that in the record.

Mr. DUNN. Yes; the last one I will read: "Coordination with industry in development of standards and specifications," and the second: "Organization and function of departmental standardization offices."

The first point, as I said, we want to be certain we are lighting on something which is producible with existing tooling and, secondly, to incorporate the latest technological advances of which industry is aware.

The last basic provision in this directive which is of some importance, I think, is that the military departments were directed to establish at their headquarters office at a level high enough to permit them to manage the Department's share of responsibility under the program, an organizational unit with that responsibility.

This directive went further than directives customarily do from Mr. Wilson's office. It went on to identify the specific functions which these departmental standardization offices should be assigned so they would be in a position effectively to carry out their department's responsibility.

Mr. LIPSCOMB. Has that section of the directive been fulfilled?

Mr. DUNN. In my opinion, in all except one case, I would say.

Mr. LIPSCOMB. Well, there are only three cases.

Mr. DUNN. That is right, 2 out of 3.

Mr. LIPSCOMB. Two out of three. Which one has to fulfill that directive?

Mr. DUNN. Completely to give the situation, I would have to say the Army would be the one in which additional work has to be done in this particular area, and I don't like to put the finger on them publicly, but that is so.

The second major action, as was suggested earlier, was the assignment, the division of responsibility for these five-hundred-odd classes of supply among the three military departments, and, as Mr. Lanphier suggested earlier, this was the subject of some protracted negotiations.

However, this assignment was made in June 1955, so that all three departments were given the basis on which they could project plans to take care of their responsibilities.

This has been published and made available to industry, and it appears to be a rather popular publication, because it identifies for industry specific points within the Department of Defense where they can go with respect to a stated commodity problem.

Mr. FASCELL. Well, then, am I correct now in understanding it took about a year to develop and complete this assignment?

Mr. DUNN. Approximately, as my recollection is.

Having divided the pie in terms of responsibility, the next major task was the establishment of work programs for fiscal years so that the departments could then marshal the resources necessary to support that program and carry it out.

These programs were developed for fiscal years 1956, 1957, and 1958, and, as I suggested earlier, we are presently sitting down to develop the 1959 program and make such adjustments in these as are necessary.

I think, in the light of some of the discussion which took place earlier, I also rehearse in a little detail some of the sequence of events in this programing business just to be clear.

The first fiscal-year program was issued August 1955, about 2 months after the beginning of fiscal year 1956. It identified the classes for which detailed plans were to be prepared for fiscal year 1956 by each department.

It was issued, as you can see, about 2 months after the beginning of the fiscal year, and it was late when it got out. We took our first reading of progress under that fiscal-year program at the end of December, 4 months after it had been issued, and found what Mr. Eckhart earlier was suggesting was the situation then—that in terms of performance it was woefully weak at that point.

Subsequent to that time this directive that was mentioned earlier was issued by Mr. Wilson, directing that the military departments make available the resources required to bring this program current by the end of fiscal year 1957.

Each department in complying with this directive encountered a number of problems internally in their departments, some of which I am sure related to the controller, but each department did come back with the assurance that they would adhere and comply with Mr. Wilson's directive.

Later on, in early 1956, and the specific date—whether it is April or May—since practically the entire fiscal year had lapsed at that time, we did revise our 1956 program to correspond to what at that point in time was a practical reality.

We also revised the fiscal year 1957 program.

That was the sequence of events in our programing in the early efforts of this standardization.

The other major activity which we have carried on constitutes the preparation and issuance of supplementary guidance to carry out what is basically stated in our directive. Those consist primarily of manuals for various purposes, and we provided a new manual which spelled out the philosophy in some detail for the guidance of the departments, a manual for specifications and standards, an outline of forms for both specifications and standards.

That outline of forms has been adopted by the Aircraft Industry Association and the RETMA for their own use, and it constitutes a very sound basic piece of guidance for documenting this kind of information.

Mr. ECKHART. For the record, would you identify what those initials mean?

Mr. DUNN. Radio-Electronics-Television Manufacturers Association.

The next section of my presentation deals with the techniques which are normally employed to achieve this reduction in variety any standardization is designed to bring about. This chart portrays the two basic techniques which are normally employed in any class of commodities.

The entire group of commodities is subjected to 2 screenings or 2 reviews, one of which is relatively nontechnical and the other is highly technical.

The first screening process we call simplification, and I will go into detail on that momentarily, but this is simply the removal of what exists in our supply system of those items that we find we can do without.

The engineering analysis screening or the technical screening analysis, on the other hand, is the engineering analysis of the nature of the item, the function it performs, the characteristics of the item, with a view to seeing whether or not through design or some other means further reductions cannot be made in the items remaining after simplification.

These processes will be applied, as you see against approximately 3 million items.

Now, the simplification process I would like to illustrate with a couple of specific examples. Starting out with the data developed by the catalog, we find this situation which I am sure is a hypothetical one, where we have ——

Mr. FASCELL. Hypothetical, you hope.

Mr. DUNN. No, as a matter of fact, I know it is not hypothetical completely.

We have a situation where there are four screwdrivers. The only difference among them is the length of this blade, one-eighth of an inch difference.

The function of the simplification process is to ask the question: Why do we need these 4 different kinds of screwdrivers to perform the functions they ought to do and when that question is asked, the answer in this case is that 1 of these, that is, the standard length, will perform the functions of the 4, that all 4 can perform.

So, this is identified as standard and these other 3 are binned together with them and we have 1 item of supply instead of 4.

I would like to give a more detailed example, if you like, of what kind of reductions are possible through this process of simplification.

Take the slotted-head machine screws, an item which is very common. In the specification in connection with this item there are identified as being used by us a number of configurations of heads, nine of them.

Through the simplification analysis it was found that the pan-head could replace these 5 types here; that the countersunk 82° head could

replace these 2; and the fillister head could replace these here on the chart.

So, these three styles of heads could replace what we are presently using. Considering two additional characteristics of these screws, we consider the diameter and the length. We reduce the varieties of this item in the characteristic of diameters from 18 to 8 and, in lengths, from 26 to 19.

Then, the pan-head style, we will reduce diameters from 11 to 8; and lengths from 26 to 9, and the flathead diameters from 18 to 24 and 26 to 19 in the case of lengths. When we look at the materials from which these things are fabricated, we find that 7 are authorized for use, and the requirements existed only for 3 of these types, reducing further the variety.

Looking at the finishes, an infinite number of finishes were possible and four of these were adopted as standard.

When you total up the result of this kind of an effort, and this is the kind of reduction which you find, from 19,500 varieties to 6,600, eliminating in this particular case some 12,000 items on this subject, and I am very sensitive about having a high priority for screws, nuts, and bolts, the industry offers as standard 400,000 of these kinds of things—400,000. That is better than 10 percent, Mr. Chairman, of the total number of items that we have got in the supply system.

And the applications for fasteners are obviously universal. It is hard to think of one item where you don't have a need for a rivet or a bolt or a nut or a screw, so that if it is suggested we have not assigned a proper priority to this kind of stuff, I am going to review this very carefully to make certain that this is the case, and we have given it one of the highest priorities.

Mr. RIEHLMAN. May I ask a question: With regard to the personnel you use in this simplification program, is this where you use a great group of engineers?

Mr. DUNN. Not so much in this process, Mr. Riehlman, as in the later screening, technical analysis. There is some proportion of supply people who can make a contribution in this.

Mr. RIEHLMAN. Well, do you know whether or not you are using engineers in this field or using other types?

Mr. DUNN. We are using both.

Mr. RIEHLMAN. You are using both. Have you any idea of the breakdown?

Mr. DUNN. I would have to guess at it. I don't have the specific figures at this time.

Mr. RIEHLMAN. The point I am trying to get at is this, if we are using engineering skills in this field, I can recognize where that is necessary when you get into electronics and certain other fields, but in the simplification you are talking about here, for many, many of these items I cannot, for the life of me, see where you need to get into the research and development group of engineers.

Mr. DUNN. It is awfully easy, I think, to overlook some of the engineering considerations that go into the process of simplification as I have been illustrating. To determine, for example, that the pan-head can effectively replace these five other configurations of heads, there must be an understanding of what the function of a head of a screw is, what kinds of applications are suitable for the various types

of head, and so forth. Now, that is not knowledge that is normally found in a supply——

Mr. RIEHLMAN. You don't need a great group of engineers to decide it, do you?

Mr. DUNN. You need some engineering knowledge.

Mr. RIEHLMAN. Well, that is right; I would agree with you there.

Mr. DUNN. Yes, but what I am suggesting, Mr. Riehlman, is that this is not totally a nontechnical exercise.

Mr. RIEHLMAN. I will agree with you on that.

Mr. DUNN. And I will agree that some supply technicians can and do contribute to that process.

I would like to illustrate next the engineering analysis, the type of standardization which, as I suggested earlier, is a more highly technical analysis of the function of items and their characteristics, to see what further reduction can be made in them.

In this case I would like to talk about an item with which I think you are all familiar, an ordinary battery-charging generator. The work in this area, incidentally, is done jointly by the military and industry.

You asked earlier about our relationship with industry. I think I can say in this particular area that this industry's advisory committee has done yeoman service for the Department of Defense without any compensation.

To locate this one item, I would like to relate it to the whole program that is going on in this area and that has gone on for several years. I think in some degree you are more or less familiar with what we are trying to do in the internal combustion engine program. So there is some understanding, this chart suggests that these internal combustion engines are found in the automotive industrial and marine engine applications and the work that has been done to this point has been confined basically to the industrial type engines and to gasoline fueled industrial type engines.

The first major accomplishment under it was the standardized high mortality parts, where we reduced the wrist pins, pistons, and so forth, from something like 2,200 parts to something like 200. It was a tremendous job of design that was done there, by industry, design of standard products which can be made within the existing tooling of the engine industry.

The second half of the gasoline-powered industrial standardization program, and the one we are presently concentrating on, is in the field of the accessories.

Now, when you get into this field of accessories, you find that these accessories have application not only in gasoline engines but in diesel-fueled industrial engines, and likewise in automotive engines and likewise in the marine engines. So that in developing standards for these applications, the technical requirements of all of these things have to be brought into consideration.

Now, the project on generators was first proposed to us by industry, who noticed the great variety of items that we were getting, particularly in two rating groups, 140 to 700 and the 700 to 1,400 wattage rating groups.

In undertaking the project, an analysis of our supply situation was made and with respect to the 2 groups, suggested by industry as

the most serious, we did find that we had 151 different makes, models, requiring 2,260 spare parts in one group. We found in the second group, which is not so serious, 4 models requiring 80 spare parts. But we did find in this process, we did discover that there was another group shown on this chart here, having 92 models requiring 1,395 parts.

Obviously, therefore, we added this later category to the standardization project.

Mr. HOLIFIELD. Were those special devices which the military had required for special purposes that could not be met by the other types?

Mr. DUNN. Not totally, many of them were just frills of the original manufacturers. They like to put a little curlicue so that when you want to replace it, you have to go to them.

Basically, that is the kind of problem here, and so, relating our problems, we found some other interesting engine information. We found that in the past year 40 new makes had come into the system requiring 700 additional spare parts.

This engineering analysis, then, came up with this kind of a standardization result. With respect to the ratings, of which we were employing a minimum of 5, we adopted 1; and with respect to voltages, where we had 4, we adopted 1 as standard; and with respect to brush design, we reduced the variety from 3 to 1; and on mountings, over which there was no control, we adopted 1 standard mounting; and with respect to the drive mechanisms, of which there was an infinite variety, we adopted a single drive.

Thus, we have one generator replacing 151 different makes and models, and we have 16 spare parts required to support the generator instead of 2,260.

Now, this chart I put here to make one basic point, that you do not do this job with mirrors—it takes time. This is a chart which portrays the status of a number of accessory standard projects and the color legends indicate their status at these points in time.

And just to suggest the nature of the exercise through which you must go to arrive at the kind of a result that was just described, the black area is the time required for the preliminary design. Having examined your varieties and having identified the various applications you have for them, the preliminary design which is going to meet your requirements takes, in these cases, this kind of time shown on the chart here.

The yellow area is the time allowed to check your proposal for standards with industry, to determine what kind of an impact that has on their productive facilities, to determine whether or not there have been developments in industry that are useful. This kind of time is involved in that exercise.

When that has been done, the tentative standards are developed and produced. Then, during this kind of a period of time shown on this chart, tested both in the laboratory and in actual service to determine that what you put down in your drawing will actually perform as has been forecasted for it.

And then the military standards are developed and coordinated by all the users within the military. You will note, and I would like for you to take particular note, of the kinds of times shown on this chart that are involved in these kinds of projects.

This one, for example, here on the chart will not be completed until eary 1957, and it has gone on since 1956.

Mr. HOLIFIELD. This would relate to new procurement, and gradually you would phase out these nonstandard articles?

Mr. DUNN. Yes, sir.

Mr. HOLIFIELD. But as long as you had to keep nonstandard items in the inventory, it would be necessary to keep spare parts?

Mr. DUNN. That is so.

We are talking about equipment which would have an extended life, there we would have to replace the parts to maintain good equipment. As soon as it was worn out then we would cease procuring it.

Mr. HOLIFIELD. As long as it is part of the inventory, you need to include parts for maintenance?

Mr. DUNN. Yes, sir.

Now, this was the only point I wanted to make in connection with what is this kind of a business that we are in. While this chart is here, it might be interesting to look at the kind of reductions which are forecast for this area as a whole. This relates to units, not spare parts, reduced from 2,255 to 73 units, and the spare parts that would be required for these 2,255 units is reduced to this amount on the chart——

Mr. HOLIFIELD. Of course, many of these items will have several years of use.

Mr. DUNN. Yes, indeed.

Mr. HOLIFIELD. So that could only mean that you would start your new procurement at that time——

Mr. DUNN. Right.

Mr. HOLIFIELD (continuing). Of the standardized articles.

Mr. DUNN. Right.

Mr. HOLIFIELD. And 10 years from today some of these items may still be in use.

Mr. DUNN. Depending on how long-lived the equipment is; that is true.

Mr. HOLIFIELD. Yes, sir.

Mr. DUNN. It shows a percentage reduction of 96 percent. An important area of standardization which is carried on, which is useful to understand is the standardization of packaging practices relating to items.

Public Law 436 makes specific reference to packaging, and in the developing of a program we do give consideration to standardization of packaging materials, and in addition to the uniformity in our specifications of requirements, for packaging, for preservation, markings, and so on. Obviously if we have three different packaging requirements from the three military departments, it would cost industry more to produce them for us. That is part and parcel of an effort we carry out continuously.

Aside from the packaging practices, the chart shows the practices relating to the basic—the points where standardization effectively starts, the drafting room. The practices relating to the preparation of drawings, the communication, if you like, of engineering intelligence, the symbols and abbreviations that are used and the codes, and so forth, in addition to the standards for operating characteristics of items within the item itself, and between the equipment with which it

is associated, meaning such things as voltages which not only affect the item itself but all items with which it is associated. So all of those standards we develop and they do not relate to specific classes but cut across a number of classes.

This chart suggests the characteristics of some of the drafting room practices and standards which have been developed, standards for the portrayal of tolerances, standards for symbols, standards for abbreviations, for the format of the drawings, standardization even of the size of the drawings, so that you could save on the equipment, you might say, required to store these drawings, and so on. This program, incidentally, we carry out in very close coordination with the American Standards Association, RETMA, and SAE, because they have a very vital interest, too. These standards actually constitute the basis for standards being developed by the American Standards Association.

The Department of Defense has given leadership in this particular field, and you will find these standards in many engineering universities where they are training young men, as guidance.

Now, the techniques by which this reduction in variety of whatever character it is we are attempting to create, are made effective in design, where the design is limited in new development to the use of what has been determined to be standard in these documents and in procurement where procurement also is limited to the items identified in the standards and where the supply manager replenishes his stock is likewise limited. By our policies, as I said, they are mandatory for use by these people.

Now, this is the system of standards we employ within the Department of Defense, standards that we treat equivalently with military standards. Those which cover common items are developed under the sponsorship of GSA. Those are just as mandatory for use within military departments as in civilian agencies and are just as mandatory as the military standards that we employ for ourselves.

Mr. HOLIFIELD. Is there any duplication of effort in establishing the military standards and Federal standards, or do you assign to the GSA certain areas where they develop Federal standards and you accept them, and vice versa?

Mr. DUNN. Well, let me give you an explanation of that, Mr. Chairman.

First of all, the great bulk of Federal standards are prepared, in fact, by the military departments and coordinated by them, so where we have responsibility for the preparation of a Federal specification, we obviously would not duplicate it. We do not, as a matter of policy, of course, develop any military standards for which there is already a GSA standard, we would revise that rather than creating our own, because these are equivalent documents within the frame of reference. We see no distinction.

Mr. HOLIFIELD. There is complete coordination, then, in the development of these standards, and no duplication involved?

Mr. DUNN. Yes, sir; that is so.

Mr. HOLIFIELD. In other words, we started out with the idea of a Federal catalog under Public Law 152 and that was to take care of the whole field of procurement, both civilian and military and then by the passage of Public Law 436, the major part of the job and responsibility and funds were allocated to the military to do the job.

But in our hearings we always have those assurances that there would not be duplication and even though GSA was given a minor position, we might say, in identifying and setting up standards, they would coordinate their efforts completely with those of others.

Mr. DUNN. And that is so, Mr. Chairman, we do work very closely with GSA.

In the developing of plans for common-use items, for example, we call them and their people sit down with us and they are aware of what we are planning in that area, so that we are all together and not pulling at odds.

Again, those industrial standards that are nationally recognized and meet our requirements and that we adopt for use have a status comparable to any of them——

Mr. HOLIFIELD. How are they referred to? Are they referred to under Federal identification or under the identification of the industry?

Mr. DUNN. That will vary, but we prefer to have it identified in industry terms, because that is how it is known by industry itself.

Mr. HOLIFIELD. But do you give it a corresponding Federal identification in the catalog?

Mr. DUNN. Oh, I am not sure I understand you, Mr. Chairman.

Mr. HOLIFIELD. What I am trying to find out is this: What is the standard of identification? Would you adopt a serial number on an industrial part which met your standards, or would you use a separate Federal identification serial number?

Mr. DUNN. Well, we would not normally use any identification number. The reference we would make, Mr. Chairman, is a reference to the identification of the industrial standards, ASTM specification number so-and-so, that is one method.

Another is to abstract from that specification those requirements which are pertinent to the things we are using them for, so we have a variety of practices, but in terms of identification of items, we would not ever get them out of an industrial standard.

Mr. HOLIFIELD. You would always identify the actual object with a Federal identification number?

Mr. DUNN. Yes, indeed; yes, sir.

Now a good share of our effort—we have talked primarily about standards which reduce the variety of things. We carry out a very heavy parallel effort as part of this program which you might describe as an engineering service to the procurement function, in the development of specifications. We do make a distinction between a standard and a specification. A specification we identify as basically a procurement document which contains the technical requirements for the item, including the requirements for packaging and inspection. Its function basically is to give the technical basis on which there can be a meeting of minds between the contractor and the Government as to what it is we are buying and as to what it is they are binding themselves to provide.

In this process we do undertake to establish a firm level of quality for the items we are buying. We, as a matter of policy, require that there shall be uniform requirements among the three departments, for the same item that performs the same function. In that respect, likewise, this exercise bears on the standardization function. In that

process we hope we are eliminating special requirements, shall I say, that we find sometimes in specifications, and add to the cost to the Government.

Mr. HOLIFIELD. And which also, in some instances, conceal proprietary items which give a monopoly position to some industry supplier of it.

Mr. DUNN. That is right. We would not consciously authorize the publication of a specification of that character which discriminates or which restricts procurement.

Briefly, that touches on some of the bare elements of our exercise in standardization. I would like to talk for a minute on the status of our program.

I think it is clear to you that this new effort, the effort we have been calling this new effort, is in fact a superimposition upon a going effort, of additional work. We have attempted to do that in a way which will not dislocate whatever was being accomplished under the old phase.

Just running through this chart, in fiscal year 1956, under the old operation we completed some 2,295 projects and in the new phase of the program we started work in the development of plans on 97 classes. We completed and approved one detailed plan. And so that there will be no misunderstanding, this chart portrays the revised 1956 program which was revised in April or May, not the one issued in August.

In fiscal year 1957, during the first half of the year, under the old phase of our effort, we had scheduled 1,258 projects of which we completed 1,129. Work was scheduled to begin on 110 classes, and it was begun on 110 classes.

Nineteen detailed plans were scheduled for submission—8 rather than the 10 you suggest, were approved.

There are, we know, 6 more which will be in our hands in a matter of days. This is not as serious a backlog as these figures might suggest.

In fiscal 1957, for the balance of the last half of the fiscal year, we had scheduled 1,259 projects, beginning work on 67 classes on the development of plans—that figure was wrong, that is 64 instead of 67 plans scheduled for approval.

In fiscal year 1958 under the old phase, 1,791 projects are scheduled for completion and work will be started on 50 classes, and detailed plans submitted on 14 classes.

You will note as between this and this [indicating on chart], that there is a gradual reduction in the number of projects under the old phase. That is because our program calls for the integration of the old-phase work with the work being done as the detailed plans are being developed.

So, over the years these projects under the old phase will reduce, and under this new phase will increase.

Mr. HOLIFIELD. I note just the opposite, that in 1957 and 1958 your old-phase plans increased and you reduced your new phase, in 1958. Why is that?

Mr. DUNN. No; I think that you are just misconstruing this chart, Mr. Chairman. This is the figure here, 1,791, that you are looking at, and 1957 is divided into two 6-month periods, and the——

Mr. HOLIFIELD. Oh, yes; I see.

Mr. ROBACK. What is the terminal date for phasing out the old existing projects?

Mr. DUNN. When all the plans are approved. That is the 5-year terminal figure I gave you earlier, all projects will be carried on under the detailed plan.

Mr. ROBACK. Was there a directive that 75 percent of the old-phase projects were supposed to be completed by July 1956?

Mr. DUNN. That is so; that was our objective, and that is how we arrived at this [indicating on chart], but I think you have got to keep in mind that we have not got plans in very many classes, as I pointed out. So the necessary work in terms of development of specifications and standards has to go on, and so new projects are being initiated continuously, and that will go on until such time as there is full integration between the two programs.

This last chart suggests in a very gross manner some things which have been accomplished since Public Law 436 was passed, the reduction of items, the space made available—the reduction of items was in the vicinity of 500,000, the space made available was almost 9 million cubic feet, and 1,250,000 man-hours were saved through these various efforts.

Mr. ECKHART. Actually, that is work that has been completed under the existing phase?

Mr. DUNN. Basically that is so; yes, sir.

Mr. ECKHART. And is that also true with respect to the example you gave on generators?

Mr. DUNN. Yes, sir.

Mr. ECKHART. So that this will not be in conflict with your previous testimony on the detailed plans that have been completed, since none of those covered an item like generators?

Mr. DUNN. That is so; yes.

That completes my presentation, Mr. Chairman. I will be glad to answer such questions as you have.

Mr. HOLIFIELD. We will have to go, we are expecting the bell to ring momentarily for rollcall vote.

(Discussion off the record.)

Mr. HOLIFIELD. We will adjourn at this time, and meet in this room at 2:30. If we are called by an additional rollcall, we might be a little late getting back, but we will try to reconvene at 2:30.

(Whereupon, at 12:30 p. m., the subcommittee recessed, to reconvene at 2:30 p. m., of the same day.)

(REPORTER'S NOTE.—Hearing scheduled for 2:30 p. m. this day was subsequently postponed to reconvene at 10 a. m., Thursday, January 31, 1957.)

DEFENSE CATALOGING AND STANDARDIZATION PROGRAMS

THURSDAY, JANUARY 31, 1957

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON MILITARY OPERATIONS
OF THE COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, D. C.

The subcommittee met, pursuant to recess, at 10 a. m., in room 1501, New House Office Building, Hon. Chet Holifield presiding.

Present: Representatives Holifield, Fascell, Lipscomb, and Minshall.

Also present: Herbert Roback, staff director; James F. Eckhart, counsel; and Robert J. McElroy, investigator.

Mr. HOLIFIELD. The subcommittee will be in order.

Gentlemen, we are sorry we had to break our engagement yesterday afternoon. Right after the vote on the foreign-aid bill, the appropriations for this committee were scheduled on the floor and we thought that in order that we might be here this morning, we had better get our appropriations.

I think you gentlemen have had some experience in getting your own appropriations through so you know how that is.

Mr. ROBACK. Mr. Chairman, before you proceed to standardization, may I ask 1 or 2 questions about the catalog.

Mr. HOLIFIELD. Yes.

Mr. ROBACK. Mr. Gay, what is the accumulated cost of the cataloging program today?

STATEMENT OF ROGER GAY, DIRECTOR, CATALOGING, STANDARDIZATION, AND INSPECTION, OFFICE OF ASSISTANT SECRETARY OF DEFENSE FOR SUPPLY AND LOGISTICS; ACCOMPANIED BY JOHN J. DUNN, STAFF DIRECTOR, STANDARDIZATION DIVISION; PAUL M. BOYLAND, ASSISTANT DIRECTOR, STANDARDIZATION DIVISION; AND GEORGE W. RITTER, STAFF DIRECTOR, CATALOGING DIVISION

Mr. GAY. I think Mr. Ritter has those figures.

Mr. RITTER. The cataloging costs are divided into the normal costs over the same period in which the Federal program has been running, and the Federal program itself costs $149.8 million during the last 9 years.

Mr. ROBACK. Do you have an allocation for the identification phase, or can you figure that?

Mr. RITTER. No; that is total cost including—well, any costs incident to the Federal program, publication of data as well as the actual research involved in the identification.

Mr. ROBACK. Do you have any further comment on cost?

Mr. RITTER. I can give you the entire costs if you would like to have it. The departmental programs which as you know have paralleled the Federal programs right up to conversion, because the systems must maintain the identity of the items until we have changed over to the use of Federal identification.

The departmental costs independent of Federal during the 9-year period is 152.8 million. The Federal cataloging program costs from 1949 through fiscal year 1957, 149.8 million.

Mr. ROBACK. This cataloging program as far as identification had to meet a goal. Do you have any evidence that in trying to meet these goals there was overhasty cataloging?

Mr. RITTER. Very definitely.

Mr. ROBACK. What is your revision process; will you describe it?

Mr. RITTER. May I explain what I mean by that?

The earlier efforts which were accelerated resulted in the production of data which had to be revised during the last 4-year period. As you gentlemen will remember, in our presentations here in 1953 we explained a refinement program, that is, a program in which we reviewed all identification data developed prior to that time, and we scheduled that review by commodity area along with the completion of any unidentified items in those areas.

Now that is the phase of the program which was completed in December, and at which time we had completed the review of any data already produced and the identification of any items which had entered the systems up through December.

The result is that as of that date and as of now, all items that are currently in the military supply systems have been identified in accordance with the Federal code.

Mr. ROBACK. They have been identified in accordance with the rules and regulations, but not necessarily according to a way of being used?

Mr. RITTER. No, no; they have been identified and have been assigned Federal names, descriptions, and stock number. The job is completed insofar as existing items in the systems are concerned. It was mentioned yesterday that there will be a constant revision of data as additional items are brought into the system and added to those already present.

For example, in Mr. Dunn's example yesterday of screwdrivers, any consolidation of screwdrivers by different lengths will bring about a revision in the Federal catalog identification because there will no longer be a 4-inch. There will be from a 4-inch to a 6-inch-length screwdriver, and that has an impact upon the identification records.

But as of now, the data which applied to items in the systems has been completed and is ready for the systems to convert.

Mr. ROBACK. What kind of revision work do you do now on catalog identification?

Mr. RITTER. We do the work recommended by the departments. For example, if an item is withdrawn from the supply systems, that action must be reflected in our records.

If two items are consolidated, for example, if there should be a determination made by standardization or simplification people that

a glass ashtray and a brass ashtray, which presently have two identifications, would be brought together under one stock number, that must be reflected in our records, because the stock number would then cover a glass or brass ashtray, and then we have transfers from one kind of an identification to another.

If a very specialized item, for example, has been introduced into the system under a manufacturer's part number, we call that a reference type of an identification.

If it is discovered that that item can be identified by words and be described, why it is transferred to a descriptive-type identification, and that transfer is a constant thing when specialized items move from specialization to more common items.

So primarily in summary as to the changes, we have new items entering the system, obsolete items dropping out of the system, transfers from types of identification as a specialized item becomes of more common use or more common manufacture to the point that it can be identified by specifications and by written words, and we have cancellations, because an item is perhaps invalid as established in our system.

Mr. HOLIFIELD. Now as to the status of your identification, I believe it has been testified that that has been currently brought up to date and completed for current articles?

Mr. RITTER. That is right, sir.

Mr. HOLIFIELD. In reaching that point, you set deadlines for the different services, did you not, as to when they would complete their identification projects?

Mr. RITTER. We set deadlines by commodity area for all services. We did not schedule the completion upon a particular service, but we said all antifriction bearings in all systems will be completed by a certain date.

Mr. HOLIFIELD. Now let me question you as to the quality of the identification that has been accomplished.

Is it or is it not true that in meeting these deadline requirements, the time was found to be too short, and there has been some hasty improvisations, possibly in the field of an inordinate number of reference numbers, to manufacturers' identification, rather than in the establishment of your Federal identification numbers?

Mr. RITTER. No, sir; I will not confirm that because we have actually considered that the reference-type identification, they are the highly specialized items that are more practical of description such as airplane parts, jet engine parts, and so forth, would constitute approximately 60 percent of the volume in this initial effort.

Actually, the actual figure is 59-plus percent of the reference type in contrast to the 41 percent of those items that are identified by words; in other words, the kind of things that are more commercial type procured under specifications can be identified without reference to manufacturing part numbers.

Now I do not mean to say that every identification in our times is absolutely correct, but it was correct to the best ability of the people, No. 1, who owned that item, they are the ones who prepared the identification, and No. 2, by the people who reviewed that item.

We had a reviewing procedure performed by selected organizations which had capabilities and large supply interests in a particular item,

before it reached our central operation for comparison with all items in that category.

I might illustrate. If one organization in the Army described an antifriction bearing, it did so in accordance with established procedures, and it wrote it in a prescribed form set forth by a description pattern.

When that was completed, it was sent through a selected organization, for example, we say the Navy, which had the reviewing responsibility for all antifriction bearing descriptions prepared by all services.

After that review was performed, any inaccuracies discovered or any duplications found, the accurate identifications were then sent to our central operation where the final comparison with everything anybody had ever sent in on antifriction bearings was made.

At that point the Federal stock number was assigned, and the item identification was published.

Mr. HOLIFIELD. You would say then that if this committee had been furnished informally with the information that certain branches of the service, in order to meet their deadlines of identification, had hastily thrown together a considerable number of identifications, which have to be completely redone, that that would be in error.

Mr. RITTER. I can neither confirm nor deny that, sir, because until we prove otherwise, we must assume that the service did this job honestly, and submitted the items in accordance with the rules.

May I add, we have a check built into the system whereby if that is done, we can discover it to a large degree.

In our central processing office in New York, there are recorded all part numbers associated with all items of supply regardless of whether they are described by words, such as a pull hammer or a resistor or a bearing, or whether they are identified strictly by the manufacturer's name and part number.

Now if activity sends in as a reference-type identification an item with the part number, and it matches something that someone else has described, then he must accept the described item, and he is made aware of the fact that this item has been described, and that the stock number for that item is the one we furnish him for the described item.

That does not always screen out all of these possibilities. I want to be quite frank in saying that. That is a built-in check. If anybody else has that item in a system and he has identified it by any other means, we do have that means of discovery.

Mr. HOLIFIELD. You are not aware then—you mentioned the Army—you are not aware, for instance, of any departments in the Army that rushed their final months of identification through to such an extent that it will have to be redone?

Mr. RITTER. No, sir.

Mr. HOLIFIELD. Or the Navy?

Mr. RITTER. No, sir; nor the Air Force, nor the Marine Corps, I might add.

Mr. HOLIFIELD. You might as well include them all.

I understand that Mr. Gay has an additional statement that he wishes to make at this time, is that true?

Mr. GAY. With your permission, sir, Mr. Lamphier in his statement yesterday touched on the overall picture as far as conversion utilization is concerned. I have some detail I think would be helpful to

the record with respect to area utilization which I would like to have placed in the record.

Mr. HOLIFIELD. It will be received without objection.

(The document is as follows:)

STATEMENT OF VINCENT F. CAPUTO, STAFF DIRECTOR, STORAGE AND DISTRIBUTION DIVISION, OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (SUPPLY AND LOGISTICS)

Mr. Chairman and members of the committee, I should like to say at the outset that I consider it a privilege to appear before this committee to discuss the Department of Defense activities in the conversion and utilization plans of the cataloging program. I should like to say, also, that you, Mr. Chairman, and many members of this committee who have been responsible for the establishment of this Federal catalog program have been an inspiration to me in my work in attempting to come up with a realistic program with respect to the conversion and utilization phases. As indicated in our semiannual reports to the Congress, every effort has been, and is continuing to be, made to achieve the full potential benefits to be derived from the development of a single uniform catalog system. Towards this end, the military departments have worked zealously with our OSD staff in maintaining established schedules, overcoming delinquent areas, and initiating activities which contain a utilization payoff. These I will discuss in greater detail in sequence in my statement.

Conversion means the changeover from the use of existing stock numbers, names, and other identification data to the use of Federal catalog data in all functions and at all levels of supply throughout the entire Department of Defense supply system. A conversion schedule was established for the military departments in June 1954, thus assuring conversion to Federal catalog data.

Conversion is scheduled for completion by or before December 31, 1958. This schedule is based upon a comprehensive analysis of the supply systems and the operating methods and procedures of the military services. It reflects, as nearly as possible, a balanced workload spread over the 4½ year period covered by the schedule. In developing the schedule, it was anticipated that conversions during the first several months would be relatively slow until experience could be gained. It was also anticipated that conversion capabilities would continue to increase throughout the entire conversion cycle. Accordingly, the larger portion of conversion effort is reflected in the second half of the schedule. Since the schedule was established, it has been necessary, on two occasions, to effect revisions to correct imbalances in workload. These imbalances were occasioned primarily by the migration of items between classes, classification and reclassification problems, and inability to acquire data for identifications.

These revsions have not prevented us from converting the total number of items scheduled to date.

There have been some slippages in conversion. In each case, we have cited the degree of slippage in our semiannual reports to the Congress. For the most part, these slippages are corrected within a 6-month period after they occur. There are, at this time, several commodity areas in which only a small percentage of the total items remain to be converted. However, we consider any such commodity area as incomplete even though the number of items remaining to be converted may be as little as 5 percent. Measures have been taken to keep slippages to an absolute minimum and the results of these measures over the past 12 months have been most gratifying. The services have been extremely cooperative in working with us to rectify all slippage that has taken place to date.

The status of conversion in each of the military services as of December 31, 1956, is as follows:

	Number of conversions scheduled by Dec. 31, 1956	Number of conversions completed by Dec. 31, 1956	Number of conversions ahead of schedule	Number of conversions remaining	Total number of conversions scheduled
Army	502, 425	807, 511	305, 086	97, 620	905, 131
Navy	283, 389	285, 882	2, 493	969, 258	1, 255, 140
Air Force	181, 390	357, 859	176, 469	774, 844	1, 132, 703
Marine Corps	42, 754	146, 673	103, 919	47. 591	194, 264
DOD total	1, 009, 958	1, 597, 925	587, 967	1, 889, 313	3, 487, 238

There is increasing evidence that the services are pushing toward early completion of conversion. The Army and Marine Corps, for example, are ahead of their schedules on the number of items converted. The Navy also has exceeded its schedule in 2 areas and is planning for further acceleration during 1957. The Air Force, while slightly behind at this time in completing several commodity areas as scheduled, has expedited the conversion in areas having future due dates. Therefore, it has completed a total number of individual conversion actions considerably in excess of the quantity programed for completion by the end of 1956.

In monitoring the conversion phase of the Federal cataloging program, we receive, each quarter, comprehensive conversion status reports from the military departments. In addition, the field visit program of the Office of the Secretary of Defense has proved highly successful as a management tool to keep the conversion phase in balance. As a result of these visits, action has been taken, where necessary, to correct factors which were retarding conversion progress as well as to improve methods and procedures to accelerate conversion. Obviously, the military departments have borne the brunt of conversion; however, the continuous analyses of conversion methods and procedures and policy guidance provided by OASD (S. & L.) have enhanced considerably the overall DOD conversion capabilities. Our program of field visits will continue, not only as a means of monitoring conversion but to explore new applications of catalog data for management improvements.

The advisory group, which is comprised of military service representatives who are responsible for monitoring the conversion phase within their services, continues to play an important role in the conversion phase. Meetings of these representatives and ourselves provide a closer working relationship with and among the military services. We jointly analyze conversion production and workload data, develop ways and means to anticipate and offset adverse conditions, and institute measures aimed at increasing the efficiency of the conversion effort.

The Armed Forces special weapons project and the National Security Agency, which have been incorporated into the conversion phase of the cataloging program, are showing considerable progress. The number of items to be converted by these agencies is estimated at 20,117 and 17,103, respectively. They also are scheduled for completion by or before December 31, 1958.

In previous meetings on the subject of the Federal catalog program, primary emphasis has been placed on the identification of items and the conversion of the system to the use of the new Federal catalog. Utilization was not discussed in the same sort of specifics. Let me just explain what we mean by utilization of the Federal catalog data. Then we should like to cite a few examples of uses we are making of the program and our method of supervising and administering catalog utilization. Finally, we will indicate the type of work that is currently in process and what we envision for the future utilization of the standard catalog throughout the Department of Defense.

So many interpretations have been assigned, at different times and by different people, to the term "catalog utilization" that it seems desirable to explain exactly what the Office of the Secretary of Defense and the military services mean when they refer to catalog utilization. We define catalog utilization as "the management application of the common language of item identification both within and among the military services, particularly with respect to improvements and adjustments which it makes possible." In promoting catalog utilization, it is our objective "To provide for prompt and continuing action on the part of all elements of the Office of the Secretary of Defense, the military departments, and other agencies of the Department of Defense to utilize Federal catalog data to the maximum extent for the purpose of improving materiel control operations within the Department of Defense supply system."

Under this concept of utilization, the Department of Defense is pursuing management improvement programs in areas where such action is made possible or practicable by the existence of a common-supply language. The predominant field of opportunity for utilization, of course, is in those actions that affect more than one military service. A few examples of management improvement programs that indicate positive action to improve Department of Defense-wide operations follow.

Outstanding among programs of this type is the one that we have designated the single-manager plan. Although this plan was explained in considerable detail to the Committee on Government Operations, during the last session of the

Congress, its close relationship to utilization of Federal catalog data makes it desirable to review briefly its major features and the extent of its application.

The single-manager plan, as it affects supply, covers categories of items that are basically nontechnical in nature and have a high usage factor in both the commercial and the military economies. They fall in commodity areas that are familiar to us in our day-to-day activities. Existing single-manager assignments parallel the civilian merchandising systems that furnish you the shoes you are wearing, the aspirin that you may keep in your desks against a late afternoon headache, the orange juice that you enjoy at breakfast, and the gasoline that powers your automobile. These represent the types of commodities that lend themselves, by their commonness, to supply through a common or single system, run by a single manager.

The single manager is the Secretary of one of the military departments. He is responsible for the supply of all four services. In each single-manager commodity area, the military services compute their own gross requirements, budget for their anticipated requirements, and. at the station and base level, purchase and control retail stocks. Under the procedural control of the single manager and in a manner similar to a commercial warehouseman, they may be storing material for shipment, at the direction of the single manager, to activities of all services. All other supply functions are vested in the single manager. The collation of requirements, the determination of purchase quantities, the act of contracting and the administration of contracts, the determination of delivery points into the military system, the control of stocks in storage: all these responsibilities fall to the single manager.

What does the single-manager system, as it applies to the management of common-use supplies, mean to military supply? How many commodity areas are affected? How many items? What is the volume of business in those items?

Commodity areas now assigned to single managers include subsistence, medical, clothing-textiles, and petroleum. The items included, which amount to only 2 percent of all line items in our system, account for 20 percent of our volume of transactions. Annual business in the items runs to $2.6 billion.

The dependence of the success of the single-manager system on the utilization of the Federal catalog data is obvious. This refers, not merely to the common language of a single stock number and name but to all of the additional pieces of information available in the catalog program, to the complete identification data, to manufacturers' names and part numbers, to standards and specifications information, and so forth. It is probable that the establishment and operation of the single-manager plan represent the ultimate in utilization of the catalog in the commodity areas concerned.

But there are other areas where the payoff from a standard catalog is substantial. One of the areas in which the Department of Defense is fostering management improvement is its interservice supply support program. Its implementation within the military services has been dynamic and it has been showing results—results measurable in dollars of supplies cross-serviced.

The implementation of this program is typical of the complexity and magnitude of any Department of Defense-wide management improvement program. The organizational echelons, the numbers of people involved, and the geographical implications all contribute to this complexity and magnitude. Finally, this program illustrates the size of the potential benefit from any worldwide improvement.

Who is involved in a military worldwide supply management improvement program?

First of all, the Office of the Secretary of Defense and then the Secretaries of the military departments, their military chiefs, and the top-level staffs of the military services.

In each service headquarters, one man is responsible for overall supply management. We refer to him as the supply manager. At the next echelon are the inventory control points, of which there are several in each service, each responsible for managing a commodity segment.

The decisions made by the inventory control points have their direct effect on the depot system of the services, where goods are received, safeguarded, and shipped.

Who else is affected by this program? The military operators, first at the headquarters level of command, both in the United States and overseas. Next there is the retail stockage and use point, the station, base, or camp.

Finally, the last man involved, the user, and there are millions of them.

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Now we have discussed the implications of the worldwide improvement program in terms of people and activities involved. But to fully understand the operation, there is a second question to be answered: "What has to be done to install the program and make it work?"

First of all, we return to the Office of the Secretary of Defense. Here, a policy is set and a policy directive issued. In this case, that document was DOD Directive 4140.6, published on July 5, 1955.

Next, the military services. To them, this was largely a new requirement, to set up permanent arrangements for cross-support, worldwide and supply systemwide. Solution of the problem required considerable study and comparison of complex and somewhat dissimilar command and supply organizations.

On December 30, 1955, a document called the Joint Army-Navy-Marine Corps-Air Force Agreement on Interservice Supply Support was issued. This agreement established an Interservice Supply Support Committee.

The Interservice Supply Support Committee is composed of the supply managers. Moving swiftly, they had by the end of March 1956, chartered commodity coordination groups in eight commodity segments. With respect to area groups, more complex problems of organization and local conditions delayed formation until September of 1956.

Commodity coordination groups are composed of members of the inventory control points that have an interest in a given commodity area. During the first 5 months of their operation, transfers were made in quantities that we consider significant, considering their problems in organizing and developing operating agreements in an endeavor quite foreign to any of their previous experience. This gives every indication that the interservice supply support program, given a chance to develop fully and prove itself, will have a big payoff.

Physical cross-servicing is accomplished at the depot level. This, in terms of supplies and equipment, is another payoff.

Now, the area coordination groups in the field commands. In these commands they are organizing and investigating the problems involved and the facilities that they have to help one another. At the stations, of course, the area groups will accomplish the interservice support operations.

Once again, the last man who is involved is the user. He is the one who must benefit, in terms of faster supply and fewer supply refusals, from the interservice supply support program.

The ability to utilize a common catalog is a virtual "must" for the complete success of this program. Working members of commodity coordination groups have told us, in the course of field visits, that the catalog is an indispensable basis for their operation.

The work of the commodity coordination groups offers an illustration of utilization of the catalog data prior to complete conversion. Not all of the inventory control points engaged in the operation are completely converted. With identification completed, however, they do have knowledge of their materiel in terms of the new Federal data. Hence they are able to work with their fellow members of the groups through the medium of this common language.

The single-manager system and the interservice supply support program have been discussed in considerable detail in order that we might make clear the meaning, to us, of catalog utilization in conjunction with management improvement, and in order to provide some idea of the size and complexity of the problems involved in large-scale improvement programs. We should not want to leave the impression that our interest is limited to only these areas. Let me cite just a few additional programs where management planning and catalog utilization join in management improvement.

The utilization of uniform identification in the Department of Defense standardization program is constant. It gives a basis for assigning standardization projects, between and within military services. In accomplishing standardization, the comparison of catalog data for different items is a first and fundamental step.

Advances in technology over the past several years have resulted in the introduction of many electronic equipments and equipment components into our operations and our supply systems. Design and maintenance of these items is a complex problem, and potential equipment failure is cause for deep concern. The Department of Defense has instituted a system of reports from the military services, designed to identify high-failure parts and tubes; avoid the use of inferior parts, tubes, and materials; identify particularly reliable items; and predict maintenance requirements. Interservice reporting is based on the fact that "electronic reliability and maintainability problems encountered in the

military departments are basically the same." The interdependence of the departments on one another is provided for by reporting parts under the Federal stock number.

Over the past years, benefits have been cited as potentials to be realized from the utilization of Federal catalog data. Let us review just a few of those benefits and the DOD position with respect to achieving them.

It was said that the Federal catalog should "provide the foundation for a uniform or integrated supply system." It is being used as the foundation for the single-manager system, the interservice supply support program, and other Defense-wide programs.

The existence of a single catalog was expected to "facilitate interchange of supplies" and "reveal possible interchangeability." Both of these benefits are being exemplified in both the interservice supply support program and the single-manager program. Let me give you one specific example. During the period between September 1, 1956, and January 24, 1957, the clothing and textile single manager received from the military services, other than the Army, 215 military interdepartmental procurements requests with a dollar value of $24,200,000. The agency was able to satisfy 66 percent of these requests in whole or in part from Army stocks. The dollar value of material transferred amount to 3,100,000, or 13 percent of the total requested. The fact that the material was identified uniformly in all the services was a major factor in being able to accomplish this action.

We were told that utilization of a uniform language would reduce inventories. In the field of medical supply a comprehensive review was made of the items managed by all services, to isolate those items that should be considered as truly medical items. As a result, 2,000 items were determined to be duplicated in other supply systems. These items are being eliminated from medical supply. Such a review and determination would hardly have been possible without the common language of the Federal catalog.

We have been told that the Federal catalog program would improve the relationship of Government and industry. The truth of this statement cannot be contested. The mere fact that a commercial manufacturer or vendor can now deal with all military services for the same item under the same description instead of four different designations, must prove a benefit to both parties.

Still another benefit cited was that the catalog would aid redistribution, disposal, and conservation of resources." The Department of Defense program for the reporting and screening of excess personal property offers substantiation of this benefit. Under the current procedures, excess items are reported and screened under Federal catalog groupings, and when the number is available, under the Federal stock number. Redistribution within the Department of Defense has been increasing. While this is due to many factors, such as constantly improving procedures and vigorous policy direction, the existence of a standard catalog offers a positive means of identification that must be a factor in the increase.

These are but a few examples of the Department of Defense programs that evidence intelligent application of the data made available in the Federal catalog. For purposes of this statement we believe that they will suffice. However, many more programs are in progress.

It is evident from just these few examples that management improvement programs are in operation in the Defense supply system, that we are utilizing the catalog data wherever it will help those programs, and that our efforts for improvement are not restricted to any one commodity area, or one group of people or one functional area. It is an across-the-board effort.

Responsibility for assuring maximum utilization throughout the Department of Defense is vested in the Office of the Assistant Secretary of Defense for Supply and Logistics. A brief word as to what we do in order to carry out that responsibility.

Our staff supervision of catalog utilization in the Department of Defense is positive in its nature. It includes coordination at the departmental level, personal contact in areas of potential utilization, education in the tools made available for utilization by the Federal catalog, suggestions with respect to applications of the data that may have been overlooked or that may be suitable for future planning. We make field visits to installations representing all echelons of supply and all functional areas. At that point, talking to working-level operators, we are able to put meat on the skeletons of our ideas for improvement and to discover the operating problems, if any, that may make a plan

difficult or impossible operation. There, also, we pick up local applications of the catalog that may be explored further for extension to other operations.

We have informed you, thus far, of what we see as the role of utilization in supply management improvements, of typical examples of what has already been accomplished, and of our method of administering utilization.

Now, what is supply management doing and what do we see in the future? First of all, there are the various existing programs, some of which we outlined earlier. These are continuing programs, subject to extension. In the case of the single-manager system for example, the Secretary of Defense has indicated to the military departments that "the feasibility of further extension of this management technique will be determined later after careful study of possible savings and the advantages and disadvantages of this type of operation, recognizing the primary mission is to effectively support the military effort of the country." Interservice supply support, using the commodity coordination group organization, is projected to expand to create additional groups in new commodity areas. So our current work will continue and be extended in the future.

In addition, we are looking for and exploring new fields of endeavor. We shall cite a few examples of Department of Defense exploration and planning.

Electronic data processing equipment is an item of considerable concern in our planning for utilization of the catalog. There is a Data Systems Policy Council in the Department of Defense with the assigned mission of exploring all potential applications of electronic data processing machines and systems. The characteristics of the Federal catalog data are such that the availability of this equipment considerably broadens the utilization potential. Consider the interservice supply support program, already mentioned, where eight groups in several commodity areas have to exchange information on well over a million items. The potential increase in efficiency to be derived from high-speed data processing equipment in this area can hardly be overestimated.

As conversion progresses and the interservice supply support program progresses, the ability to group data by related items will aid materially in the solution of distribution problems. It will facilitate the study and improvement of distribution patterns as against the geographic dispersion of troops and anticipated demands.

The Assistant Secretary of Defense for Supply and Logistics will continue to explore all possibilities for utilization of Federal catalog data. This study must include all of the functional areas of supply and their relationship to the management tools available. Developments in one functional area of supply quite often have an effect on an application in one or more other functional areas. We will continue to seek, record, and, where indicated, circulate information of such developments.

Not only does our study include what is presently contained in the Federal catalog program; it covers also the discernment or development of additional data that can be added to it for management purposes and the possible applications of mechanical aids that enable intensified management effort.

This, gentlemen, concludes our explanation of the way in which we are assuring conversion to the Federal catalog data throughout the Department of Defense and, further, assuring intelligent utilization of that data in the improvement of the Department of Defense supply system.

Mr. HOLIFIELD. Now, Mr. Dunn, I believe you are free to go ahead and make such additional presentation as you wish, if you had not completely finished.

Mr. DUNN. I really had completed what I had prepared formally for presentation to the group, but there are 1 or 2 things on which I would like to provide some clarification, 1, and 2, I should like to supplement some of the testimony I provided yesterday.

First off, on a specific piece of testimony I provided yesterday in which I identified one of the departments as having been deficient with respect to implementing a specific requirement of the directive, in response to Congressman Lipscomb's question. I want to be certain that the committee had a precise understanding of what was in my mind when I gave that reply.

The precise condition I had reference to was a failure to supplement the number of staff engaged in the central organization in that department. I should be much distressed if this response went to any other extent than that.

In terms of the broad mosaic of the complete implementation by the departments of this entire program, I would like to have it unequivocably clear in the record that I am unable to distinguish among any of the departments with respect to either the quality or the responsiveness of their implementation of this program.

Mr. ROBACK. You mean they are all doing a good job or they are all doing a bad job?

Mr. DUNN. I mean what I said, Mr. Roback, that I cannot make a distinction with respect to the quality or responsiveness. As to the character of the implementation, I might say this: that I do not look forward in the next 10 years to being in a position to say honestly to this group or to my superiors that I am wholly satisfied with the implementation given generally by all three departments.

That is the nature of this program, if that is a response to your question.

Mr. HOLIFIELD. We will accept that statement in the spirit of complete unification.

Mr. DUNN. Very good.

I wanted that to be clear in the record.

Mr. HOLIFIELD. It was not brought about by any consultation on your part with the department that was so maligned?

Mr. DUNN. No; it was brought about by my own contemplation during lunch yesterday, and also by some advice by my own staff, who were fearful that perhaps an improper construction might have been placed on what I said.

Mr. ROBACK. You received no general remonstrance from your superiors, is that what you said?

Mr. DUNN. No; I received no remonstrance from my superiors. That is not my problem by a long shot.

So much for that one item.

The second piece of information I should like to suggest is this: That inadvertently we did ourselves, I think, a disservice yesterday, and I think the committee, in a fairly important regard. We have provided to your staff, and we have talked about yesterday, the several fiscal-year programs we have developed. There was a programing activity which preceded all of these fiscal-year programs in a fairly important area, which due to the fact that we had given it special treatment, we ourselves in defining our programs negelected to include it in any of these fiscal year programs, and we are just now correcting that in the fiscal 1959 program.

But there has been a very significant body of effort going on in a very important field under a specialized procedure which we devised some time ago, some considerable few months before we issued our first formal fiscal-year program. This effort has been carried on in general consonance with the principles I have been describing here in my presentation yesterday.

I think that it would be useful to get a full fix on what has been going on if I just identified this area for you and outlined briefly what was done.

I talk now of the areas of textiles and subsistence.

January 6, 1956, which precedes by some 8 months the first formal fiscal-year program we issued, Mr. Lanphier issued to the Army the instruction I hold in my hand, and in connection with some of the concern which found expression yesterday, it might be worthwhile to read just a few sentences on this.

Mr. ROBACK. What is the date again, Mr. Dunn?

Mr. DUNN. January 6, 1956.

It says here:

Reference requested that the current programs for standardization in the textile, subsistence, and furniture areas be expedited under existing plans. Recent meetings with representatives of DepLog and Quartermaster Corps of the Army, indicate that no substantial progress has been made in speeding up this work.

This office is deeply concerned with the current lack of progress in textile and subsistence standardization in particular, because of their interest to congressional committees and the emphasis placed on these areas in the Hoover Commission reports.

It is therefore desired that priority be given to these areas over furniture (FSC Group 71) and food preparation and serving equipment (FSC Group 73), which were previously given an equivalent order of priority in the Defense standardization program for fiscal year 1956.

To expedite accomplishment, it is also desired that until otherwise directed, the Army, as standardization assignee for these two areas, conduct this work in accordance with the attached "Standardization program: Textiles and Subsistence," dated January 4, 1956. The Air Force and the Navy, as participating departments are requested by letter, copy attached, to collaborate fully in meeting the stated objectives.

Now this program which attempted, because of our concern for the areas involved, attempted to short-cut certain of the formal procedures which surround the general conduct of this work as I described it yesterday. We attempted to make some shortcuts and we developed this specialized procedure.

It contains an identification of specific areas and dates by which certain performance was scheduled. I would like to, with the Chair's permission, make this a part of the record so that you are informed on this particular thing.

Mr. HOLIFIELD. It will be received.

(The document referred to is as follows:)

ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D. C., January 6, 1956.

Memorandum for Assistant Secretary of the Army (Logistics)
Subject: Acceleration of Standardization Program for the Textile Area (FSC 83, 84, 7210), and Subsistence Area (FSC 89)
Ref: (a) ASD (S & L) Memo 22 Nov 1955, Subj: Defense Stdzn Program

Reference (a) requested that the current programs for standardization in the textile, subsistence, and furniture areas be expedited under existing plans. Recent meetings with representatives of DepLog and Quartermaster Corps of the Army indicate that no substantial progress has been made in speeding up this work.

This office is deeply concerned with the current lack of progress in textile and subsistence standardization in particular, because of their interest to congressional committees and the emphasis placed on these areas in the Hoover Commission reports. It is therefore desired that priority be given to these areas over furniture (FSC Group 71) and food preparation and serving equipment (FSC Group 73), which were previously given an equivalent order of priority in the Defense standardization program for fiscal year 1956.

To expedite accomplishment, it is also desired that until otherwise directed, the Army, as standardization assignee for these two areas, conduct this work in accordance with the attached "Standardization Program: Textiles and Subsistence," dated January 4, 1956. The Air Force and the Navy, as participating departments are requested by letter, copy attached, to collaborate fully in meeting the stated objectives.

A copy of your implementing directive transmitting these instructions to the assigned activity is requested.

(S) R. C. LANPHIER, Jr.,
Deputy Assistant Secretary of Defense
(Supply and Logistics).

STANDARDIZATION PROGRAM: TEXTILES AND SUBSISTENCE
(FSC 7210, 83, 84, AND 89)

JANUARY 4, 1956.

Objectives

1. Simplification to be completed by the following dates:

Textiles area, end items only	June 30, 1957
Textiles area, other than end items	June 30, 1958
Subsistence	June 30, 1957

2. Existing selected item, packaging, and extension projects to be continued and new ones established as warranted.

Procedures

1. Existing selected item, extension, and packaging projects are to be continued in accordance with the "DOD Detailed Plan for Accomplishing Standardization of Textiles, Apparel, Related Items and Packaging," dated May 8, 1954, and the equivalent plan for the subsistence area, except that the coordinating committees are to be dissolved. Currently established task groups and subcommittees should operate under the management of the assigned activity instead of the coordinating committees.

2. The textile plan of May 8, 1954, and the equivalent subsistence plan mentioned above shall no longer govern in the case of new projects.

3. The Military Manual for Standardization M201 shall not be applied to these areas until specifically invoked by OSD.

4. The standardization assignee will conduct these standardization programs in accordance with the Manual for Military Standardization and Standardization Studies, DSMA M3, and specific modifications or instructions as follows:

(*a*) Standardization study projects are hereby established as listed in tabs A and B, to cover end item simplification, preparation of drafts of proposed limitation standards, and recommendation of appropriate extension projects for subareas requiring more protracted study. A single limitation standard may be used to cover each FSC class, or additional standards may be used where warranted, covering specifically defined portions thereof.

(*b*) The DepSO's of the participating departments will designate participating activities by telephone and confirm by letter, on telephone request of the assigned activity.

(*c*) The assigned activity will request from the participating activities, lists of appropriate scope covering all items required for future repetitive procurement for their supply systems. The lists are to contain FIIN's, item names, Federal catalog descriptions as required by the assigned activity, and the applicable specification requirements (including type, grade, class, etc.). It is essential that all necessary items be included because these lists will form the basis of standards issued to restrict procurement to only those items listed.

(*d*) The assigned activity will conduct an interdepartmental review of the listings and negotiated to (1) eliminate as many items and variations in items as is feasible in a quick review, (2) agree on extension projects where further standardization is considered desirable, and (3) on specification projects required to implement the agreements reached.

(*e*) The assigned activity will draft proposed limitation standard(s) normally for a complete FSC class or specifically defined portion(s), incorporating agreements developed, and normally using standard format and forward as indicated by Tab C. It will normally include an index number, FIIN, item name, other necessary catalog data, and the using services coded as A, N, MC, and AF. No attempt will be made at this time to add to or select from the approved catalog

data, data solely for the purpose of enhancing the use of the document as a control over design changes. The standard will not include a listing of the items found to be not for procurement. The assigned activity will obtain initiation of the required document projects from the Standardization Division, OASD (S. & L.), coordinate, and submit the standard(s) and any unresolved differences thereon to the Standardization Division for approval in accordance with Manual M3. When an item standardization is a new variation not currently in the supply system, the assigned activity will obtain appropriate catalog identification as expeditiously as possible. However, when necessary such items may be identified by other means, pending establishment of approved catalog data.

(*f*) The assigned activity will recommend to the Standardization Division, OASD (S. & L.), initiation of extension and specification projects agreed upon, without further interservice coordination, with copies of such letters of recommendation forwarded to the participating activities.

(*g*) After the above simplification procedure is completed either for an entire FSC class, or for all the end items in a class, the assigned activity will prepare a report that will normally indicate the following:

(1) The total number of line items or line end items in the class according to Federal catalog records.

(2) The number of line items standardized for future procurement in the limitation standard(s).

(3) A list of items initially indicated by the military services as being required for procurement but subsequently eliminated through this project.

(4) An indication of new items adopted to replace eliminated items.

(5) The extension projects established.

(6) Any areas or items on which the assigned activity considers there to be an opportunity for further standardization that is not covered by extension projects.

(*h*) After simplification of all end-item classes is completed, a review will be made by the assigned activity to assure that all unneeded specifications have been canceled. However, responsible specification activities should take cancellation action as early as the need of cancellation becomes apparent, and forward copies of cancellation actions to the assigned activity.

(*i*) In the case of standardization agreements and reports previously developed and approved by the military services, including those implemented by OSD standardization action letters or memorandums, and those not yet implemented, the assigned activity will include the standard items covered by these documents in drafts of the appropriate limitation standards.

(*j*) The participating departments will collaborate fully in these programs by furnishing qualified representatives for study groups, by furnishing data, and by processing correspondence and documents within stated time limits, as may be required.

(*k*) The assignee department will submit semiannually a report of overall progress and expectation covering the textile area (FCS 7210, 83, and 84), and another covering the subsistence area (FSC 89). These reports should be similar in content and timing to those currently provided for these areas.

TAB A

JANUARY 4, 1956.

Schedule of simplification projects (end items only) (FSC Groups 83 and 84)

Project No.	FSC class	Title	Completion due
601–1	8315	Notions and apparel findings	May 1, 1957.
601–2	8335	Shoe findings and soling materials	June 1957.
603–3	8345	Flags and penants	December 1956.
601–4	8405	Outerwear, men's	January 1957.
601–5	8410	Outerwear, women's	February 1957.
601–6	8415	Clothing, special purpose	January 1957.
601–7	8420	Underwear and nightwear, men's	March 1957.
601–8	8425	Underwear and nightwear, women's	June 1957.
601–9	8430	Footwear, men's	July 1956.*
601–10	8435	Footwear, women's	December 1956.
601–11	8440	Hosiery, handwear, and clothing accessories: men's	June 1956.
601–12	8445	Hosiery, handwear and clothing accessories: women's	September 1956.
601–13	8455	Badges and insignia	March 1957.
601–14	8460	Luggage	August 1956.
601–15	8465	Individual equipment	June 1956.

JANUARY 4, 1956.

TAB B

Schedule of simplification projects (end items only) (FSC Group 89)

Project No.	FSC class	Title	Completion due
601-16	8905	Meat, poultry, and fish	June 1956.
601-17	8910	Dairy foods and eggs	September 1956.
601-18	8920	Bakery and cereal products	November 1956.
601-19	8925	Sugar, confectionery, and nuts	December 1956.
601-20	8930	Jams, jellies, and preserves	January 1957.
601-21	8935	Soups and bouillons	Do.
601-22	8940	Special dietary foods and food specialty preparations	March 1957.
601-23	8945	Food oils and fats	Do.
601-24	8950	Condiments and related products	April 1957.
601-25	8955	Coffee, tea, and cocoa	June 1957.
601-26	8960	Beverages, nonalcoholic	Do.
601-27	8965	Beverages, alcoholic	Do.
601-28	8970	Composite food packages	Do.
601-29	8975	Tobacco products	Do.

TAB C

LIMITATION STANDARD

This document has been promulgated by the Department of Defense as the military standard to limit the selection of the items or products covered herein in procurement. This standard identifies the items authorized for repetitive procurement in the military services, and shall become effective on issuance.

Index No.	FIIN	Item name and description	Specification	Users
		Standard items		
		Mattress, bed:		
1	263-8579	Felted cotton padding, tick covering; 72½ in. lg., type I, class 1, 26 in. w., 4 in. thk; 18 lb.	MIL-M-16039A	A, N
2	716-0535	Felted cotton padding, tick covering; 73 in. lg., 27 in. w., 4 in. thk; 29 lb., type II, grade B.	V-M-81b	A
3	716-0500	Felted cotton padding, tick covering; 76 in. lg., 34 in. w., 4 in. thk; 38 lb., type II, grade B.	V-M-81b	A, N, AF
		Mattress, pneumatic:		
21	254-8887	Nylon cloth, 2 sides coated w/natural or synthetic rubber; olive drab, QM shade No. 7; inflated by mouth; dim. inflated 76 in. lg., 36 in. w; designed for use w/sleeping bags.	MIL-P-10747A	A, AF, MC
22	299-8518	Cloth cotton, 1 side coated w/rubber; olive drab; inflated by valve; dim. inflated, 72 in. lg., 25 in. w.; designed for use w/folding cots.	MIL medical purchase designation No. 2, dated 31 Mar 1954.,	AF

Mr. ECKHART. Mr. Chairman, in connection with the clothing area, is the standardization work being done in clothing and textiles being accomplished under the M–200 series of manuals or the old manuals?

Mr. DUNN. We have a mongrel procedure in connection with these two areas, as I mentioned.

This anticipates by some 8 months the first formal program, as I suggested. It makes an attempt to custom-build to the requirements of that area, the procedures to be observed so that a minimum delay would take place in connection with it, so that it is hard to give you an answer which has real meaning in terms of existing manuals.

They are partially applicable, generally applicable, and in certain specific respects not applicable, the old and the new manuals.

Mr. ECKHART. The question that would naturally follow from that, if all of the other work is being done in accordance with the

200 series of manuals, and 1 or 2 areas are being accomplished under the old manuals, are you going to have uniform results across the board in your program?

Mr. DUNN. Let me put it this way. There will be effective results in the textiles and subsistence areas.

There has resulted, I think I would have to admit, a certain amount of misunderstanding in a few quarters as to how we were doing this particular job, but I think that that little confusion—and it is not serious—is far outweighed by the progress that we have been able to gain in these classes generally.

I would like to suggest next—and these things I picked up quickly this morning so that if my story is not wholly coherent——

Mr. ROBACK. Before you leave that point, Mr. Dunn, this memorandum asked the Army to get on with the standardization in the textile clothing field beginning last year.

We would like to have a very brief memorandum reporting progress for that year in that field.

Mr. DUNN. I will do better than that, Mr. Roback. I have here a semiannual report which is required by the procedure that the chairman has in his hand, and I will leave copies with the reporter if you like.

These are reports submitted as of the end of this past calendar year, and they are reports incidentally which my staff has not at this point fully analyzed, but I should like to have the committee have them nevertheless.

(The reports entitled, "Textiles and Apparel" and "Subsistence" appear in the appendix as exhibits D and E.)

It might be useful to just add a few points in connection with this thing.

There are 17 textile classes and 14 subsistence classes covered by the procedure I have provided. The simplification work with respect to the 17 and 14–31 classes, the simplification work with respect to those classes, is scheduled for completion by June 30, 1957, and that is part of the schedule.

Generally the quartermaster and his participating agencies are on schedule.

I have in another piece of paper here a record of the dates for completion of six of these specific classes and the results of the simplification efforts which might be of interest to you.

Class 7210, Household Furniture, of 177 items in the class, 93 were adopted as standard, and that documentation is complete on that.

With respect to tents and tarpaulins, of 380 items, 101 were identified as standard.

Men's footwear, of 5,811 items, 2,466 had been identified as standard.

Women's footwear of 2,068 items, just one-half, 1,034 have been identified as standard.

Hosiery, handwear, men's, and so forth, from 549 items to 328.

Mr. HOLIFIELD. Do you mean to say that you have 2,500 standard footwear styles or types?

Mr. DUNN. These are sizes and styles and types.

Mr. HOLIFIELD. Sizes, styles, and types?

Mr. DUNN. Yes, sir.

Mr. HOLIFIELD. In other words, one style or type, would you list that separately for every size in it?

Mr. DUNN. Yes, sir.

Mr. ROBACK. How many styles and types other than sizes are there in men's footwear?

Mr. DUNN. You are getting into detail I don't have at my fingertips, Mr. Roback. The only figure I recall offhand is that there are about 313 sizes of shoes, and they are manifested obviously in various configurations.

Mr. ROBACK. Are the styles and types of footwear in the services classified in any way?

Would you supply us a list of the styles and types, not sizes, of men's footwear and women's footwear in the military services?

Mr. DUNN. Sure.

(The information supplied is as follows:)

FOOTWEAR SITUATION

As an outcome of simplification, the Department of the Army is coordinating a proposed standard for men's footwear covering 51 kinds, and another proposed standard for women's footwear covering 12 kinds. These standards are in a formative stage and have not as yet been submitted to the OASD (S. & L.) for approval. The footwear covered is listed below. Where similar or duplicating types are shown, the explanation appears in the column so designated for each item concerned. Such situations must either be justified or eliminated by the military departments prior to publication of the standard. Long-range projects are in progress that will lead to elimination of several of these situations which are temporarily unavoidable.

FSC Class 8430, footwear, men's:	*See footnote No.*
1. Boot, combat; felt	1
2. Boot, combat; leather, black	2
3. Boot, combat; leather, mahogany	2
4. Boot, combat; nylon duck upper	3
5. Boot, fireman	4
6. Boot, fireman; oil resistant sole and heel	4
7. Boot, flying	5
8. Boot, flying	6
9. Boot, hip	7
10. Boot, hip	7
11. Boots, insulated, submarine deck exposure	8
12. Boot, knee; acid resistant	9
13. Boot, knee	9
14. Boot, mukluk (Air Force version)	1
15. Boot, mukluk (Army version)	1
16. Boot, mukluk	1, 10
17. Boot, rubber, insulated, cold weather; rigid sole	11
18. Boot, rubber, insulated, cold weather; flexible sole	11
19. Boot, insulated, intermediate cold weather	12
20. Boot, ski—mountain	13
21. Cover, boat, toxicological agents protective.	
22. Overshoe, rubber; 5-buckle (MIL–0–836)	14
23. Overshoe, rubber; 5-buckle (JAN–0–441)	14
24. Overshoe, rubber, low	15
25. Overshoe, rubber; low, vacuum ring sole	15
26. Sandal	16
27. Shoe, baseball	17
28. Shoe, basketball	17
29. Shoe, bowling; right-handed	17
30. Shoe, bowling; left-handed	17
31. Shoe, convalescent.	
32. Shoe, dress: black, fungus resistant, geometric last	18
33. Shoe, dress; black, geometric last	18

	See footnote No.
FSC Class 8430, footwear, men's:	
34. Shoe, dress; mahogany, geometric last	18
35. Shoe, dress; brown, geometric last	18
36. Shoe, dress; black, fungus resistant (old last)	19
37. Shoe, dress; black	19
38. Shoe, dress; brown	19
39. Shoe, dress; mahogany	19
40. Shoe, flight deck.	
41. Shoe, football	17
42. Shoe, gymnasium; high, leather	17
43. Shoe, gymnasium; low, duck, gum sole	20
44. Shoe, safety; high, blucher style	21
45. Shoe, safety; molder's congress style	21
46. Shoe, safety; unlined	21
47. Shoe, service; black	22
48. Shoe, service; black	22
49. Shoe, service; natural	22
50. Shoe, service; mahogany	22
51. Slippers, convalescent patients.	
FSC Class 8435, footwear, women's:	
1. Boot, combat	23
2. Overshoe, rubber; high (MIL–O–17631)	23
3. Overshoe, rubber; high (MIL–O–2026)	23
4. Overshoe, rubber; high (MIL–O–4264)	23
5. Overshoe, rubber; low (MIL–R–3008)	23
6. Shoe, dress; black	23
7. Shoe, dress; white	23
8. Shoe, dress; black (MIL–S–11078 (QMC))	23
9. Shoe, dress; brown (MIL–S–11078 (QMC))	23
10. Shoe, gymnasium	23
11. Shoe, service; russet	23
12. Shoe, service; black	23

FOOTNOTES

(Reason for similar or duplicating type)

[1] A white rubber insulated boot for cold, dry climate (—65° F.) is being developed, which is tentatively intended to replace the felt boot, item 1, three mukluks, items 14, 15, and 16, all now made on different specs.

[2] A new black leather combat boot is being developed which is to replace items 2 and 3 when completed.

[3] This is a jungle-type boot.

[4] There is a project to develop a common fireman's boot, in place of items 5 and 6.

[5] The possible replacement of the flying boot, item 7, by the standard insulated cold weather rubber boot, item 18, is under review by the Army.

[6] The flying boot, item 8, is a special-purpose item which is vulcanized on the legs of an exposure suit.

[7] The hip boot, item 9, is an ordinary civilian-type rubber boot common to all services, whereas item 10 is a wader worn over combat boots by engineer troops.

[8] Item 11 is a special-purpose boot required for integration with special occupational clothing by means of a steel ring and rubber sealing bands.

[9] Item 13 is an ordinary knee-high civilian-type rubber boot for all services, whereas item 12 is a special-purpose acid-resistant type which would be unnecessarily expensive for ordinary usage.

[10] The mukluk, item 16, is a special lightweight item for an Air Force emergency kit.

[11] Items 17 and 18 are for wet, cold weather down —20° F., whereas the new boot mentioned in footnote 1 is for temperatures as low as —65° F. Item 17 is a rugged durable infantry type for soldiers and marines, whereas item 18 is a relatively light flexible antislip type for sailors and airmen.

[12] Item 19 is a Navy development type of rubber insulated boot for temperatures down to 0° F. Since it is not currently a standard item and its future is not yet determined, it should not be included in the standard at this time.

[13] This boot has special-design features to provide for the attachment of skis by means of a ski harness.

[14] A project has been established to provide a single spec for 5-buckle overshoes, and a single overshoe if practicable. However, since the overshoe must fit over combat boots as well as other types of shoes, study is necessary to determine whether a single overshoe is in fact practicable at this time.

[15] Item 24 is an ordinary civilian-type rubber, but item 25 is a special-purpose antislip version used for working on slippery surface.

[16] This sandal is a special submarine item used to help control athletes' foot in high humidity of submarines.

[17] Although these items of athletic footwear are currently stocked by one service, the Standardization Division is advised that the single manager is reviewing the necessity of this with a view to having all athletic footwear procured locally when stocks are exhausted.

[18] Items 32, 33, 34, and 35 are the new low-dress shoes for the four services, made over the new common last standardized in 1953, and in the three currently standard colors,

black, mahogany, and brown. None of these have yet been procured, because the services have been using up stocks of old lasts before shifting to the new last. An unreconciled situation exists with respect to the use of a fungicide treatment which has caused two black shoes to be shown here, item 32 with the treatment as desired by the Army, and item 33 for the Navy, without the treatment. Resolution of this is expected soon, so there will be only one type of black shoes required. Resolution of the three colors to a single color is more problematical, but is being considered.

[19] Items 36, 37, 38, and 39 differ from the other four items mentioned in footnote 18 in that they represent the new low shoe made over the old last of each service, instead of over the geometric last as indicated for items 32 through 35. They represent an interim situation necessitated solely by deviations necessary in the new shoe specification to adapt it to use of the old last, as an economy measure. Complete conversion to the new last as is now imminent will result in the elimination of these items from the standard.

[20] This gymnasium shoe is used as a training shoe rather than as a recreational item comparable to the athletic footwear discussed in footnote 17.

[21] A current project is aimed at adoption of a single safety shoe for all services, if feasible. Pending completion of the work on safety shoes, items 44, 45, and 46 continue as standard.

[22] A current project provides for the development of a single design and quality of service shoe with color as required.

[23] No substantial progress has been made in the standardization of women's footwear. However, some standardization may be feasible and this will be determined under the existing project. In the meantime, the 12 items shown are currently standard.

Mr. HOLIFIELD. And then as I understand it, there is over 1,000 of the women's footwear?

Mr. DUNN. 1,034.

Mr. HOLIFIELD. And that has been reduced from what?

Mr. DUNN. Just double that figure.

Mr. HOLIFIELD. Double that?

Mr. DUNN. It was cut precisely in half apparently.

Mr. HOLIFIELD. In view of the comparatively small number of women in the armed services, why it does seem that that is an unusual number of styles and types.

Mr. DUNN. If the committee would like us to research this in some detail and give them detail on it, I certainly would be glad to do it.

Mr. HOLIFIELD. It is a common item and I have no real deep interest in it, but I was somewhat surprised by the number that you still have left after your process of standardization.

Mr. DUNN. That is one thing that I hope you will keep in mind. The figures I am citing are those remaining after the simplification process, which if you will recall the chart is the initial screening that takes place.

There are, in connection with all these classes, a number of technical analysis projects which have been initiated to see what further reductions can be made.

Mr. HOLIFIELD. And you do have hopes of reducing this further before the final——

Mr. DUNN. That is so; yes, sir.

Mr. HOLIFIELD. End result?

Mr. DUNN. Yes, sir. I am just reporting now the present status of the simplification results.

Mr. ROBACK. Mr. Chairman, I don't want to be facetious here but I want to ask this question.

In your engineering analysis to diminish varieties and quantities, you might make minor engineering changes.

Now would it be conceivable that you would limit the induction in the service of men or women that might have feet that would be too big or too little?

Mr. DUNN. The sizes of shoes, and I am talking without detailed information at my hand, has been, as I understand it, the subject of research and development over a period of years by the Quartermaster and the Bureau of Standards based on the number of statistical observations of the incidence of sizes among people.

Mr. ROBACK. But it is conceivable that might happen?

Mr. DUNN. If you are asking me if it is possible, there might be a freak with an odd size that did not fit, I don't know.

Mr. ROBACK. I did not ask you that question.

Is it conceivable that for purposes of standardization you would limit the range of sizes of feet of people who come into the service?

Mr. DUNN. Oh, no. You cannot, Mr. Roback, standardize on the size of feet. Those come ready-built.

Mr. ROBACK. I am asking about the admission requirements.

Mr. Chairman, this may sound like a facetious question, but certainly by engineering analysis slight changes are made which might cut out a variety of sizes.

You can see where you might have to stock a considerable quantity of, say large-sized shoes, in the service for which you might have a very limited demand and yet, if you cut down that size, it might make quite a difference.

Mr. DUNN. The only thing I would like to say is this: If you will recall the chart I had in the early part of my presentation yesterday, I suggested that the beginning point of this whole exercise is the DOD requirements, what they need in order to carry on their work.

Obviously if there are needs to meet odd sizes of shoes, those are identified in the beginning of this exercise, so that I cannot work up very much of a lather about that potential difficulty.

Again if you would like to have a research, we will be glad to do it.

Mr. HOLIFIELD. I don't think that would be necessary.

Mr. DUNN. The last one on which I have specific data here I might just mention, hosiery, handwear women's from 213 items to 198. These again, let me state, are the results of simplification in a few of the classes.

Again there are in these and other classes technical analysis projects scheduled which it is presumed will lead to further reductions.

I would like to, as I suggested, Mr. Roback, I would like to give you copies of the latest semiannual report under this procedure so that you may have the benefit of such data as they contain.

Mr. ROBACK. While we are making requests, I would like to make one more request here.

In April 1955, Admiral Harrison, then of the Bureau of Aeronautics, was discussing with the Armed Services Committee the question of standardization of rocket launchers used by the Air Force and the Navy.

Could you supply us a brief statement as to what committee has been considering the rocket-launcher standardization?

Mr. DUNN. I would be glad to

(The information is as follows:)

ROCKET LAUNCHERS

A joint requirements coordinating group with representation from the Department of the Navy and the Department of the Air Force was established in June 1954. This group reviews operational requirements and supporting military characteristics, and recommends joint research and developmental actions in the fields of common interest. The primary aim of this group is to assure that in areas of common need, development will be guided to permit common use of system components wherever practicable. We have no knowledge of the degree of progress achieved in this unification of military characteristics to guide research and development. This is the same group referred to on April 14, 1955, by Rear

Adm. Lloyd Harrison, then of the Navy Bureau of Aeronautics, in his testimony before the Subcommittee for Special Investigations of the Committee on Armed Services, House of Representatives.

At present, the group's membership consists of: Brig. Gen. James Ferguson, Director of Requirements, Deputy Chief of Staff, Development (Air Force) and Rear Adm. D. L. McDonald, Director, Air Warfare Division, Office of the Chief of Naval Operations (Navy).

As differentiated from the unification activities conducted by the above group, the defense standardization program is basically directed toward reducing the number of items approved for use by the military departments. The detailed plan for undertaking a standardization review of FSC Class 1055 (rocket and pyrotechnic launchers) under this program is scheduled for submission to the Office of the Assistant Secretary of Defense (Supply and Logistics) in the fourth quarter of fiscal year 1958. At that time rocket launchers as well as all other items in class 1055, including those items studied during research and development by this group, will be reviewed to achieve the appropriate degree of standardization.

Mr. ROBACK. For how long and what the status of that program is to date?

Mr. DUNN. I will be very glad to.

There is one other piece of intelligence in connection with the textile thing which I think is of interest and the committee might be interested to have it.

You are all aware, I am sure, that one of the big barriers to fully productive standardization in the field of textiles has been the resistance posed on the basis of morale considerations relating to the distinctiveness of uniform.

That has plagued this kind of a standardization effort for a number of years.

On December 12, 1955, with the approval of the Assistant Secretary of Defense for Manpower and Personnel, who presumably knows what affects morale, Mr. Pike issued a piece of guidance which undertook to identify the features of textiles and uniform insignia and what in fact could be considered to be morale affecting and those which could not. These criteria, I think, are kind of a significant advance in this whole effort to bring a little further reduction in the textile area, and if the committee wishes I would like to give them this as a part of their record.

Mr. HOLIFIELD. We will receive it.

DECEMBER 12, 1955.

Memorandum for—
Assistant Secretary of the Army (Logistics).
Assistant Secretary of the Navy (Material).
Assistant Secretary of the Air Force (Materiel).

Subject: Standardization of textiles, clothing, and individual equipment, FSC groups 83 and 84 and class 7210.

Lack of standardization in the clothing and textile fields has been highlighted in recent years by congressional hearings, newspaper publicity, and Hoover Commission findings. Consideration of the problem indicates that this concern is not without justification in terms of an existing potential for standardization.

I therefore desire that standardization in this area be pressed forward as rapidly and as fully as possible. However, recognizing the role of distinctiveness of uniforms in maintaining high service morale, and the fact that high service morale is essential to continued combat readiness and effectiveness, I am furnishing the following guidelines on service distinctiveness in items for carrying on this work:

(1) Major items of dress uniforms will not be subject to standardization as regards major and readily apparent features of design, key outer material, and color. They will be subject to standardization as regards secondary or inconspicuous material, and as regards nonsignificant, or not readily apparent differences in any aspect, such as color, material, or design.

(2) Secondary items of dress uniforms will not be subject to standardization in a manner which would cause incompatibility with the other items with which they are to be worn. In all other respects they will be subject to complete standardization.

(3) All other clothing, including combat, field, fatigue, and special-purpose clothing and underwear, and all individual equipment, will be subject to complete standardization insofar as functionality permits, with any desired distinctiveness to be obtained by use of separate items of appropriate insignia, emblems, shoulder patches, or similar devices.

(4) Blankets, towels, bedspreads, table linen, and other items in FSC class 7210, household furnishings, will be subject to complete standardization except in cases of justifiable functional differences. They will not carry distinctive service markings where such markings would preclude any desirable standardization.

(5) Ribbons, insignia, brassards, and other items in FSC Class 8455, will not be subject to standardization as regards significant features of heraldic symbolism, design, and compatibility with other items. They will be subject to standardization as regards nonsignificant aspects of materials, design, and color.

(6) Except as provided above, all fabrics will be subject to complete standardization insofar as functionality permits.

It is requested that the Army as standardization assignee for this area develop a coordinated interdepartmental list of the dress uniform items or categories of items, recommended which are to be considered major items and which are to be considered secondary items for the purpose of establishing standardization eligibility under the above criteria. Any recommended exemptions from these criteria may be indicated for specific characteristics of a listed item or type, where appropriate. The list should be submitted to this office for approval within 90 days of this date.

Mr. ROBACK. The general idea there, Mr. Dunn, is that outer clothing and uniform styles were a morale factor whereas inner clothing, concealed from view, was not so important.

The question is then, have you standardized colors of inner clothing, like undershirts?

Mr. DUNN. On any specific of that nature I would have to research it, but you don't quite state accurately the gist of this policy.

Mr. ROBACK. You state it accurately.

Mr. DUNN. Let me read it to you and then we will both be together on it.

Lack of standardization in the clothing and textile fields has been highlighted in recent years by congressional hearings, newspaper publicity, and Hoover Commission findings. Consideration of the problem indicates that this concern is not without justification in terms of an existing potential for standardization.

I therefore desire that standardization in this area be pressed forward as rapidly and as fully as possible. However, recognizing the role of distinctiveness of uniforms in maintaining high service morale, and the fact that high service morale is essential to continued combat readiness and effectiveness, I am furnishing the following guidelines on service distinctiveness in items, for carrying on this work:

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(4) Blankets, towels, bedspreads, table linen, and other items in FSC Class 7210, Household Furnishings, will be subject to complete standardization except in cases of justifiable functional differences. They will not carry distinctive service markings where such markings would preclude any desirale standardization.

(5) Ribbons, insignia, brassards, and other items in FSC Class 8455, will not be subject to standardization as regards significant features of heraldic symbolism, design and compatibility with other items. They will be subject to standardization as regards nonsignificant aspects of materials, design, and color.

(6) Except as provided above, all fabrics will be subject to complete standardization insofar as functionality permits.

Mr. ROBACK. Will you supply for the record a report of the men's cotton undershirts and shorts as between the services?

Mr. DUNN. I will be glad to.

Mr. ROBACK. As to everything but sizes?

Mr. DUNN. Everything except size.

Mr. ROBACK. Colors, styles.

Mr. DUNN. I will be glad to do that.

(The information supplied is as follows:)

MEN'S COTTON UNDERSHIRTS AND SHORTS

The Army Quartermaster Corps advises that simplification has indicated that men's cotton shorts, MIL–D–3014B, and white quartersleeve undershirts, MIL–U–797B, are the standard summer underwear for all services.

Special-purpose undershirts for flight-deck use are purchased in five colors under Federal Specification JJ–U–513.

Special-purpose knitted knee-length cotton drawers are purchased under military specification MIL–D–1863A in white, and chemicaly impregnated green for protection against vesicant gas.

Mr. DUNN. There is one other piece of supplemental testimony I would like to provide, this again on the basis of suggestions made to me subsequent to the testimony yesterday. It was suggested to me that I might have left with the committee the impression that we had totally solved all the problems we have got in this program. If I left that impression I would like now at this point to specifically disabuse you of it, because we do have very serious major problems still requiring solution.

We have attempted in this thing to push on those aspects of the job which we felt would get us forward fastest, and which would, we felt also, through the experience gained in what we programed would provide us with a sounder base for the necessary guidance than we have at this point in time.

I don't think it should be necessary for me to stress—Mr. Gay did in his statement—but an undertaking of standardization on as broad a base as this program contemplates is without precedent in any quarter to my knowledge.

Thus a good part of our basic guidance in the thing necessarily has to come from experience gained in it. We have to get our feet pretty thoroughly wet before we can be convinced we are thoroughly sound in where we are going.

So it was with that thought in mind that we have given the kind of emphasis to the things which I described yesterday. But we have a long, long way to go, Mr. Chairman, before we will have a really good lock on the basic guidance for this entire effort, and I would like the committee to be aware of that situation.

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Mr. HOLIFIELD. I think the committee is aware of the complicated and tremendous field that you have to work in, and at least partly aware of a few of the difficulties.

I am sure that we are not aware of all of them. I would like to know from you or have some testimony from you on whether you think that the services will pursue this goal of as good a standardization as you can obtain with as much activity as they have in the cataloging.

In other words, do you plan, do the services plan, to have the assignment of personnel and the request for funds parallel the cataloging effort or not?

Mr. DUNN. Let me say this: I don't anticipate a number of the difficulties that attended the cataloging program in its early stages, in the stages comparable to this program, for example. I think that the support given by the departments in their efforts up to this point is more realistically based, if you like, than the support which was represented with respect to the cataloging program at a very early stage in its development.

Mr. HOLIFIELD. When you say that, why do you say that?

Will you please tell me why you think it is more realistic?

Mr. DUNN. On the basis of my observation in working with them and checking with the kind of results we are——

Mr. HOLIFIELD. Does that mean they are going at a slower pace or at a faster pace or a more efficient pace?

What does it mean?

Mr. DUNN. It means briefly that some of the lipservice which was given to the cataloging program in its early stages is not characteristic of the implementations of this program, at this stage.

Mr. HOLIFIELD. There is a real desire on the part of all of the services, you think, to go ahead?

Mr. DUNN. I am convinced of it.

Mr. HOLIFIELD. With the standardization?

Mr. DUNN. Yes, sir.

Mr. HOLIFIELD. You do not have the conflict of systems in standardization that you had in cataloging?

Mr. DUNN. We have some.

Mr. HOLIFIELD. Between the services?

Mr. DUNN. We have some of that; yes, sir.

Mr. HOLIFIELD. You still have some of that?

Mr. DUNN. Those are really some of the problem areas.

Mr. HOLIFIELD. But the very fact that your standardization programs had not been developed as far as the cataloging program for instance of the Navy had been developed would indicate that you might come to a compromise solution quicker?

Mr. DUNN. Well, I find that there is a disposition, Mr. Chairman, to integrate comparable efforts that are going on in the departments, which might not have been present in the catalog program, and that is an important thing in terms of getting at what you are trying to get in the record.

Mr. HOLIFIELD. Now the attitude has been testified to. How about the effort in terms of quantity of manpower and funds?

Mr. DUNN. It was, I think, put in the record yesterday that the Assistant Secretaries for Materiel in all departments had provided

the support required to push forward the programs which had been given them.

I do not anticipate that there won't be problems in making effective the pledges of support which have been given. But I do at the same time place considerable confidence in the obligations assumed by the departments.

But it will never be free of the hazards of budget to which all programs are subject, never.

We will have to work with those situations as they arise.

Mr. HOLIFIELD. Will there be any clearing as to standardization of new articles before identification in your catalog?

In other words, will there be a requirement that new articles fulfill quality standardizations?

Mr. DUNN. If I understand what you are getting at, Mr. Chairman, there will be a requirement that new items be checked against what has been determined to be standard to ascertain whether or not this is of sufficient improvement to warrant adoption as standard.

That is a very basic feature of this program.

Mr. HOLIFIELD. Or if a completely new item is being bought, will you proceed to buy similar articles which are not parallel to that article or similar to that article?

I will take your screwdriver illustration of yesterday where you had four screwdrivers of a certain size, and you were able to eliminate three of them.

Now, assuming that you buy a new article, a completely new article, which technology has brought forth, will you accumulate four articles of that type that are nonstandard or will there be any attempt to let standardization grow with the acquisition of this new type of article?

Mr. DUNN. If I follow what you are getting at, Mr. Chairman, our system contemplates that new items will be matched against existing standard items to determine whether or not the differences incorporated in the new item warrant approval of the use of that item as standard.

That is one part of your question as I follow it.

The other part is if there is a development in industry or in the economy which brings forth an item which has not previously existed, and it manifests itself in several forms over a period of the early few years, your question is will we develop a standard to cover this new type of thing?

Mr. HOLIFIELD. In other words, would you control the multiplicity of items at the point of procurement, or would you allow a group of similar items which might have been standardized, to accumulate in your catalog and then have to go through your whole process of standardization as to this new item?

Mr. DUNN. We cannot or would not attempt for a moment to place a brake on the development of improvements in equipment and supplies, and it is one of the real hazards involved in this program.

As I attempted to suggest in my early notes yesterday, the state of the art is an important consideration as to whether you will develop a standard or not.

Now, in the situation you cite, I would judge that the state of the art is in a very early stage of development, and it is likely, speaking

generally, that we would not develop a standard for some period of time with respect to that new type of thing.

It is likely. In the absence of a specific I don't think I could do anything further than that.

Mr. ROBACK. I would like to ask Mr. Dunn's construction of the requirement of Public Law 436, that once items are cataloged where they are repetitively procured, no others shall be procured.

Do you construe that to apply merely to cataloging or is that a requirement for standardized items?

Mr. DUNN. It is a requirement which we would expect this program to surround with definition for the military departments to observe.

In other words, we will document the items which are authorized for procurement as standard.

Mr. HOLIFIELD. This will make it more difficult then for a new item to be procured, will it not, until it has some type of clearance?

In other words, your clearance of new items before including them in your catalog will become more important, will it not?

Mr. DUNN. It will, I hope certainly that it will. We will not, however, Mr. Chairman, undertake to interfere with the required procurement actions.

Mr. HOLIFIELD. Yes.

Mr. DUNN. Those things which the departments need obviously they must have.

Mr. HOLIFIELD. It will be up to them to——

Mr. DUNN. Justify.

Mr. HOLIFIELD. To affirmatively prove that they do need this new item.

Mr. DUNN. Precisely so.

Mr. HOLIFIELD. And that an item already in the supply system will not fulfill their requirements?

Mr. DUNN. Precisely so.

Mr. HOLIFIELD. The burden of proof will be on the procuring officer.

Mr. DUNN. Exactly.

Mr. HOLIFIELD. To justify this different item which he wishes to buy.

Mr. DUNN. Exactly.

Mr. FASCELL. Mr. Chairman, may I inquire at this point to whom will he make justification?

Mr. DUNN. The justification will be presented to the department carrying responsibility for that class of item.

Mr. FASCELL. You mean procurement?

Mr. DUNN. No, the justification for the adoption of the item. The procurement as I said, obviously will have to take place if there is a need for the item.

Mr. FASCELL. What I am getting at, will the justification be made by the procurement officer to his own department?

Mr. DUNN. Oh, no.

Mr. FASCELL. To whom will it?

Mr. DUNN. The procurement officer in the first place is not qualified to justify a new item. It is the designer of the new item who has the ability to tell why this ought to be adopted as standard for use.

It is the research and development people basically who would provide that kind of justification.

Mr. HOLIFIELD. But you must have some kind of board before which he will have to go or some group of men to which he will have to go?

Mr. DUNN. Under the system we are undertaking to establish, the responsibility for screening new items against those which are standard is one of the number of responsibilities that the department having responsibility for that class of supply has as a continuing responsibility, subject to appeal by one of the departments to the office of the Secretary of Defense.

Mr. HOLIFIELD. It would seem like to me this was very important.

Mr. FASCELL. Let me see if I understand you correctly, if I may.

The department to which the basic assignment was made by the DOD Director has the continuing responsibility for the class which was assigned to it?

Mr. DUNN. Exactly so.

Mr. FASCELL. And therefore when a request for procurement comes the decision would be made by the department which has the primary responsibility for that class, is that right?

Mr. DUNN. They would be responsible for screening it against what is standard; yes.

Mr. FASCELL. So you could have a situation where the procurement officer is already within that department?

Mr. DUNN. Oh, sure.

Mr. FASCELL. And his own department then is responsible for the screening of that item?

Mr. DUNN. Sure, you could have that situation.

Mr. FASCELL. Would the situation arise that the department would screen across the board militarily?

Mr. DUNN. That is the situation I am talking about.

Mr. FASCELL. That is the situation.

So that if an assignment, for example, is with the Army on a specific class, and a procurement arises with the Navy, the Army would clear this particular item?

Mr. DUNN. Right. This is the area, incidentally, Mr. Chairman, one of the areas I had in mind, when I said we had much serious work to do yet before this system we are talking about is established and operating.

And it is a very important area.

Mr. FASCELL. Now to follow through, if I may, with just one other thing, therefore the sequence is that obviously there would be no cataloging until the procurement has been approved?

Mr. DUNN. I would have to ask you to check with our cataloging brethren on that. I am not familiar with it.

Mr. FASCELL. It can't be unless it is in the supply system, and this is the first screening step of getting it into the system. It can't be cataloged unless it is in.

Mr. DUNN. I think there is this point that should be kept in mind. In carrying out this screening, we cannot afford to delay needed procurement to perform a screening, so it is conceivable to me, subject to correction by Mr. Ritter, it is conceivable to me that the situation might arise either with identification or without it.

It is conceivable to me that that could be.

Mr. FASCELL. What you are telling me if I understand correctly is that while you have a screening process, there might be occasions where the screening would be skipped?

Mr. DUNN. No.

Mr. FASCELL. Then I misunderstood you.

Mr. DUNN. You are asking, if I understood your question, whether——

Mr. FASCELL. At what sequence——

Mr. DUNN. Whether when we did the screening we are talking about the item had associated with it a Federal identification.

Is that your question?

Mr. FASCELL. No, sir.

Mr. DUNN. Oh, well, I misunderstood.

Mr. FASCELL. My question was at what point does it get a number, Federal identification number, before or after?

Mr. DUNN. Before or after the screening?

Again I would have to ask—maybe Mr. Ritter could tell us when the identification takes place normally.

Mr. HOLIFIELD. Let me see if I can take a specific item, and let us follow it through.

Let us assume that an individual claims that he has invented a new preservative paint for use on rubber tires, let's say.

He wishes to have this approved. He has sold it on a limited basis to local posts and stations where they have the latitude as I understand it or have had in the past at least, to buy things which are not listed in the procurement catalogs.

They find that this article is a good article, and the manufacturer of this particular preservative wishes to have it listed in the military catalog. He has the recommendations of the commander of the local post, let us say, who has used it.

Does he or does he not have to submit this to some type of a research board, or an approving board of qualified people to find out if his claims are good, and if he does have an article worthy of listing for the purchase of every branch of the service?

Maybe Mr. Ritter could trace that particular process through, and I believe if that was explained, that would give us what you want to know.

Mr. DUNN. I don't know that Mr. Ritter can explain this, can you, George?

Mr. RITTER. Not that particular point.

Mr. DUNN. Not that particular question.

Mr. HOLIFIELD. I happened to have that particular problem not at this time but a few years ago.

Mr. DUNN. Let me take a whirl at it, if you would like.

Mr. HOLIFIELD. A constituent of mine claimed to have such an article and I did try to follow it through. This was several years ago. I don't remember how it came out.

Mr. DUNN. Maybe the departmental people could give you a much better picture than I can, but the general process is before an item gets into the supply system, they must have a customer for it.

Mr. FASCELL. That seems very reasonable.

Mr. DUNN. Right. It is a very modest requirement, so that in the event they do find a customer, and this customer wants that it should become a regular part of supply, I think the procedure varies among the departments.

The Army, for example, has a so-called technical committee which reviews the data which has been provided with respect to the performance of the item and screens it generally, I think, against existing items which perform the same function, and they come up with a conclusion that this is useful for us in our operations. It becomes thereby an item which is authorized for use by that department. The process we were talking about in connection with the standardization program is that when such an item is brought into the supply system, it is contemplated that it will be subjected to screening against items having been identified as standard in the manner I talked about earlier.

Generally that is the procedure I would guess.

Mr. HOLIFIELD. And at that point this person would have to prove that his article was superior to the one that had already been established?

Mr. DUNN. We could not care less about the opinion of this person. We are interested in the requirements of the department who says they need this item.

Mr. HOLIFIELD. Yes. I should have said he must secure the approval of a department of experts who would test this new item against an item which was performing the same function.

Mr. DUNN. He has got to make a sale, if that is what you are saying; yes, sir.

Mr. HOLIFIELD. He makes it on the local basis. In this case I remember this manufacturer had made it on a local basis. The local people were satisfied with it, and recommended that it be listed in the large catalog.

I honestly do not remember what happened in this particular case. It probably got lost in the Pentagon somewhere.

Mr. DUNN. That is possible.

Mr. HOLIFIELD. But I do think this is an important question because I think at least two things are involved.

One thing is that if a new article is developed that is a good article, it certainly should not be hindered by the system from entering the list, and on the other hand if it is a duplicate or an inferior article, it certainly should not be listed.

Mr. DUNN. Right. The point that this program is designed to provide for specifically is that any new item should be justified on the basis of significant improvements over what is available as standard at that point in time.

Mr. HOLIFIELD. That is what I am asking you about.

I want to know what kind of a system you have got to see that this happens.

Mr. DUNN. Yes, and what I suggested earlier was that you put your finger on one of the areas where we have to do still considerable development work, Mr. Chairman.

It is one of the problem areas.

Mr. HOLIFIELD. In other words, what you are telling me is that you do not have a system yet that will do what is involved in the question?

Mr. DUNN. Precisely.

Mr. HOLIFIELD. Well, I am glad to have the answer to that question.

Mr. DUNN. I did not mean it to be such a struggle.

Mr. ROBACK. Continuing on the general problem, what happens to the specifications when you determine an item is standard?

Do you weed out specifications that don't conform to the standards?

Mr. DUNN. I am not sure that there is a general answer to that one. Specifications are generally constructed so that they will buy a great variety of items within the coverage of that specification.

If there is a limitation on the kinds of items which are standard, those will be defined in a standard, not in a specification, and the controlling document is the standard.

It need not necessarily follow that any adjustments in the requirements of a specification have to be made because a limitation on the variety of types it will buy has been agreed to. It need not necessarily follow. It could.

Mr. ROBACK. What is the control relationship between an item which we have determined is standard and the writing of specifications which goes on among the using activity?

Mr. DUNN. The writing of specifications, if I follow what you are getting at, is directly related to the procurement needs of the departments. They must have specifications in order to procure.

In any given specific situation, you could have at this point in time a situation where there is no standard with respect to the item for which they have a procurement need, or there is a standard with respect to the item for which there is a procurement need, or there is a standard being developed or any number of possible situations.

If in the light of those possible situations you could rephrase your question maybe I could give you an answer.

Mr. ROBACK. Here is the problem.

The idea of standardization is to reduce the varieties. The using services buy in accordance with specifications which they develop.

If there is no controlled relationship between the two, then you are standardizing in a vacuum.

Mr. HOLIFIELD. That gets back to my question, that unless you have evolved some kind of a system to control the entrance of products on some basis of measurement as to standardization, it seems to me that you are never going to catch up with the job of standardization to the point of usefulness.

Mr. DUNN. I am not apparently getting through to you. The system which is contemplated by this program relies for the control of the variety on the development of standards.

Now the standards will be developed with respect to the entire spectrum of items that the military uses.

The specification situation with respect to any given item in that whole spectrum could be any one of a number at any point in time.

But the control on the variety will be expressed in the standards which will be developed where they are appropriate for every 1 of the 3 million items, or those range of items.

Mr. FASCELL. May I ask you to give us an example of the answer to both of these questions because I think it is very important at this point that we understand clearly whether or not there is going to be any control?

So let's see if we can go back and work out a very simple example.

Let's take a screwdriver, for instance, having a 4-inch bit that was described. If you could show us as an example what the standard is, the way it actually would be worded on that screwdriver, and then

give us an example of how the specifications would vary or could vary with respect to that one item, then I think we would have a clear understanding of what you are talking about?

Mr. DUNN. I would be glad to do that. I unfortunately have no documents of that character with me but I will make a point to give that to you in writing with a specific illustration of what I am describing here.

(The information supplied is as follows:)

HOW STANDARDS SERVE TO LIMIT STILL FURTHER THE SELECTION PERMITTED BY A SPECIFICATION

(Question raised by Military Operations Subcommittee of House Committee on Government Operations during testimony on January 31, 1957)

Specifications are basically intended as procurement documents. They establish the technical requirements for an item including packaging, packing, preservation, and marking requirements, and the methods of determining compliance with these requirements.

A standard is basically intended to limit selection. This it does by giving only those pertinent characteristics of an item that must be known to assure its acceptability throughout the military supply systems in terms of interchangeability or substitutability. Selection of items is restricted to those permitted by the standard, regardless whether the specification permits a wider variety. In effect, the specification acts to establish an acceptable quality level, and the standard limits selection of specific items within that quality level. The two supplement each other and are tied together by referencing the procurement specification in the standard. This further limitation on selection by standards can best be demonstrated by several examples:

Screwdrivers are procured under Federal specification GGG–S–121C. This specification provides not only for the requirements of the Department of Defense but for the civilian agencies as well. Thus, some 785 different screwdrivers can be obtained under this specification. To limit the selection within the military departments, we have issued a series of military standards for screwdrivers. These standards limit selection to approximately 125 screwdrivers from the total of 785 permitted by the Federal specification. Of course, it is a basic principle that the selection permitted by the standard must be confined to those items procurable by the specification. The controlling device on the procuring officer, as well as the designer, is the standard. The procurement officer is authorized to procure only those items listed on a standard. The designer is authorized to select only from those items listed on a standard. Guidance to the procurement officer is provided in a space in the lower lefthand corner of the standard which cites the applicable procurement specification; in this case, Federal specification GGG–S–121C.

Another example of how a standard limits selection is the one on slotted head machine screws which I mentioned in my presentation on January 30, 1957. Federal specification FF–S–92 for this item permits approximately 24,000 different slotted-head machine screws, all accepted as standard commercial items. As explained to the Subcommittee on Military Operations, approximately 19,500 were in use by the military departments. As a result of issuing military sheet form standards (MS 35221 through MS 35278), designers are limited in their selection to approximately 6,600 of the 24,000 permitted by the Federal specification.

Military specifications frequently list all varieties for which procurement is permitted. Even here the need arises to limit selection through standards in order to reduce the number of items in the supply systems. As a case in point, military specification MIL–E–1 permits the procurement of 1,000 different types of electronic tubes. (Approximatly 5,000 varieties are commercially available.) This variety of 1,000 different tubes is needed for both for the maintenance of older equipment and for use in new designs. In order to gradually reduce the number of electronic tubes required, we have issued a military standard (MIL–STD–200) which limits the selection of electron tubes in the design of new equipment to less than 200 tubes. Thus, as older equipment is removed from the system, tubes not listed on the MIL–STD–200 will be dropped from the supply system.

Mr. LIPSCOMB. May I ask a question?

Mr. FASCELL. Certainly.

Mr. LIPSCOMB. Along that same line each organization has the opportunity or it can purchase any item below a thousand dollars?

Mr. DUNN. That is right.

Mr. LIPSCOMB. It does not have to qualify under this.

Suppose different units and agencies want to buy their own screwdrivers and it amounts to less than a thousand dollars.

Do they go ahead and buy them without reporting it any place or qualifying with standardization?

Mr. DUNN. What is your question?

Mr. LIPSCOMB. As you have demonstrated to us, you cut down the number of screwdrivers listed to four. Suppose a camp does not want to use those four. They can go out and buy a thousand dollars' worth of sizes that are not listed on the standardization, as long as the total is within the thousand-dollar limitation; is that right?

Mr. DUNN. That is so.

Mr. LIPSCOMB. Then what do you do or who follows through to see about these multiple purchases on screwdrivers?

Mr. DUNN. The exemption from the use of specifications does provide for an exemption in the case of purchases under a thousand dollars, on the theory that the amount of procurement of that character will not particularly affect any program seeking to exercise control over that type of procurement.

That is arrived at I suppose on the basis of administrative judgment as to how much resources you can afford to apply to things which in terms of dollars have relatively small significance.

Mr. FASCELL. Isn't it true, Mr. Dunn, that your control in this situation would be on the dollar amounts spent to determine whether or not it had become a significant part of procurement?

Mr. DUNN. Yes. I think I might add this——

Mr. LIPSCOMB. How do you know?

Mr. FASCELL. Add up all the amounts under a thousand dollars. If it comes to a billion you start changing the system.

Mr. LIPSCOMB. How do you get that control?

Mr. DUNN. There are two things. One is in this directive where we identify this thousand-dollar exemption, we do have a parenthetical expression which says repeated use of this in an attempt to evade is obviously not in compliance with the policy.

That is one thing. The other is that nowhere do we provide relief from the adherence to standards simply by virtue of the location of the procurement officer.

We do not provide that kind of relief. The exemption that Congressman Lipscomb has reference to bears on the use of specifications, not on the standards, and we provide no exemption from adherence to standards by virtue of the location of the procurement officer, whether it is local or centrally procured we could not care less.

The limitations are to be observed.

Mr. HOLIFIELD. Are there further questions of Mr. Dunn?

Mr. FASCELL. I have one, Mr. Chairman. I just want to get back to the relationship between cataloging and standardization, since I never did get an answer to the question.

As I analyze it, there is a possibility that you would standardize items of course already cataloged, and that you would standardize

items that have not yet been cataloged, so that cataloging could be before or after standardization.

Mr. DUNN. It is conceivable.

Mr. FASCELL. In the sequence of events?

Mr. DUNN. It is conceivable. The normal situation I would be led to believe that they would be normally identified before I would give them attention, but it is conceivable that we would have others that had not been identified in the catalog.

Mr. FASCELL. One other thing. If the standards on this pencil would be graphite surrounded by wood 8 inches long, can you tell us how a specification for the procurement of that pencil would vary from that standard?

Mr. DUNN. If we controlled only the graphite——

Mr. FASCELL. He is ready to answer it.

Mr. DUNN. Go ahead, Paul, if you think you can give me a hand on that.

Mr. BOYLAND. One thing that we have to consider is the specifications themselves. Sometimes we use industry standards, for instance, which may involve more than we as a department use. We also use Federal specifications, which must take care of the civilian agencies as well as we. And when we use those specifications, the scope is broader than we want, so that our standard would be the controlling document, and from this broader selection permitted by an existing spec we would say only these are used for military application.

The spec itself would not be changed. Our standard would control the procurement, however.

Mr. FASCELL. I know, but if it is possible to write a flexible specification from an inflexible standard, I don't see how you have any control over procurement.

That is the whole point that we are trying to raise right now. If you write a standard which you say is controlling militarily and civilianwise for this pencil, which says that the writing part of it shall be graphite surrounded by wood and it shall be 8 inches long, and that is a standard, but your specification enlarges upon the standard, why what control does the standard have?

Mr. BOYLAND. The situation which I just described presupposes the preexistence of a specification. We are reducing from the spec over which we don't have complete control.

If the Department of Defense has a military spec——

Mr. FASCELL. Right.

Mr. DUNN (continuing). And we reduce it through standardization, the spec will be changed to conform.

Mr. ROBACK. What kind of controls do you impose so that at any given degree in status of standardization your specifications conform, because the procuring officer is buying according to specifications and even writing specifications?

Mr. DUNN. Required adjustment in any of the documents is the responsibility of the Department carrying on the job, whether it is a standard or a specification.

If by standardization action a specification has been rendered obsolete or deficient in some respects, it is a collateral responsibility for them to adjust that document to correspond to the requirements of the standard.

Mr. FASCELL. But, sir, excuse me, this is not the responsibility only of the department to which the class was assigned, because the standard applies across the board, so the responsibility applies to anybody who might be using the spec.

Mr. DUNN. The responsibility to effect the changes which are required in the document in terms of who is responsible, we say from the Office of the Secretary of Defense that the Secretary of the Department having responsibility for that class is responsible.

Now the process of effecting the change——

Mr. FASCELL. I don't see how that could work.

Mr. DUNN. Well, how else would it work?

Mr. FASCELL. I don't know. I mean I just don't have any idea how a department in the Army charged with the class under this system would be responsible for writing the specifications on a use required by the Navy.

You lose me there.

Mr. DUNN. It is responsible for development of whatever specifications are required for the whole class to include the essential requirements of all of the users, the other departments.

Mr. FASCELL. In other words, they are charged with the responsibility of writing a new specification to keep up with the standard, and then each military department is required then to adopt that specification.

Mr. DUNN. Right.

Mr. FASCELL. So you do have a central place writing the specification?

Mr. DUNN. Whether the specification would be written by the department having responsibility is not necessarily so. It could be written by another department.

Mr. FASCELL. It could be written by the user?

Mr. DUNN. But when you ask the question or I ask the question as to who is responsible for being certain that the documentation is current, it is the department having responsibility for the class.

This is the character of responsibility we are assigning in the program, because obviously if we flitted all over the lot to find all the people who might have a need for this thing, we would never have anybody responsible for it.

Mr. HOLIFIELD. Mr. Lipscomb has a question.

Mr. LIPSCOMB. Yesterday in your presentation you talked to us about directive 4120.3.

Mr. DUNN. Yes, sir.

Mr. LIPSCOMB. And its objectives and intent. I would like to refer to section 12—the implementation of the directive under section 12.

Has that implementation been carried out and to what extent?

Mr. DUNN. The implementation has been generally provided by the military departments.

As I said earlier this morning, I am not wholly satisfied, and I won't be for some period of time, that what is provided by this directive has been fully implemented.

I don't think when I make that observation that it can necessarily be construed as a criticism or a lack of desire to implement.

It is a reflection of the stage of development of this program. That is one feature of it, and if I can add to that, Congressman, this: There

are certain specific requirements for implementation which within the past 45 days— I do not recall specifically when— I became concerned about several specific provisions of this directive and whether or not the departments had properly and fully to their capability at this point in time undertaken the implementations that the directive required. Mr. Lanphier has directed a request to each of the three departments which enumerates a number of specific sections in this directive, and asks them to provide the specific documentation by which they have implemented these provisions.

So to generalize again in response to your question, I have some pointed reservations about the completeness of implementation into which I am presently inquiring.

Mr. LIPSCOMB. In the directive it says provisions are effective upon receipt. Then it says each military department shall implement the substance of the directive soon, and insure the instruction of all elements and levels of responsibility concerned in the content, intent, principles, and objectives of this program.

Mr. DUNN. Right.

Mr. LIPSCOMB. You say that Mr. Lanphier has not been satisfied with some aspects of the program, and he has issued requests to the departments.

Mr. DUNN. Right, to give the specification of their implementation of certain of these provisions and I think you have a finger on one of them that we have asked about.

Mr. LIPSCOMB. Does the committee have copies of the requests that Mr. Lanphier has made to the departments, so that we can better evaluate what we are doing and what our objective is?

Mr. ECKHART. No, sir; we do not.

Mr. DUNN. I would be glad to make copies of Mr. Lanphier's request available to you, if someone will make a note of that.

Mr. HOLIFIELD. And the answers to those requests, if you do have them?

Mr. DUNN. As soon as they are made available to me, I would be glad to provide them likewise.

(The documents referred to are as follows:)

ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D. C., December 21, 1956.

Memorandum for the—
Assistant Secretary of the Army (Logistics).
Assistant Secretary of the Navy (Material).
Assistant Secretary of the Air Force (Materiel).

Subject: The defense standardization program—implementation of DOD Directive 4120.3.

Paragraph XII of the subject directive requires that copies of departmental "implementing policies and procedures will be provided to the OASD (S. and L.) as they are issued." It is requested that addressees furnish this office, within 90 days after issue date of this memorandum, two copies of each such departmental policy and procedure, as well as those issued on a bureau, service, or command level, directing implementation of subject directive. It is further requested that addressees provide, by inked insertion on the margins of such departmental issuances, a paragraph-by-paragraph cross-reference, whenever appropriate, to those portions of DOD Directive 4120.3 thereby being implemented, particularly with respect to the following sections:

(*a*) VII.A.2 (dealing with the issuance of new standards); B.1; D.1 (dealing with the use of coordinated standards and the authorization of waivers and deviations by competent authority).

(*b*) VIII.
(*c*) IX.

With respect to section X, it is requested that addressees furnish two copies each of the following information:

(*a*) For fiscal years 1954, 1955, and 1956, organizational charts, functional statements, the funds expended and personnel assigned for each of the following: (i) Departmental standardization offices; (ii) subordinate organizational units down to, and including bureau, service, and command levels.

(*b*) Agreements covering interdepartmental relationships involving standardization matters.

(*c*) Names and charters of all joint agencies performing standardization functions in pursuance of subject directive with such organization and functional charts as are necessary to show status and nature of the agencies' standardization operations.

(*d*) The procedures by which the departmental standardization offices "insure effective coordination and management of the standardization effort" in the design, development, procurement, cataloging, distribution, use, and maintenance of items of military supply.

(*e*) The procedures by which the departmental standardization offices assist "in the establishment of adequate budgets and staffs for standardization operations and the integration of department and Department of Defense standardization."

(*f*) The "departmental policies and procedures to assure development and use of standards and specifications in accordance with this directive."

(*g*) The "departmental policies and procedures for monitoring departures from standards and specifications."

(*h*) The procedures to prevent "overlapping and duplicating specifications and standards."

(*i*) The procedures established for the "maintenance of the official channel of communication between its department and other departments and the Office of the Assistant Secretary of Defense (Supply and Logistics) with respect to the defense standardization program."

With respect to section XII, it is suggested that addressees furnish two copies of the following information:

(*a*) Implementing policies and procedures, other than those specified above, issued by the departments.

(*b*) Published material, guidance issuances, or other evidence showing the means by which the departments have insured "the instruction of all elements and levels of responsibility concerned in the content, intent, principles, and objectives of this program."

In addition, it is requested that there be furnished two copies of departmental lists showing normal distribution of all standardization issuances (policy, program, procedures, instructions, etc.) enunciated by the departmental standardization offices.

R. C. LANPHIER,
Deputy Assistant Secretary of Defense,
Supply and Logistics.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D. C., January 18, 1957.

Memorandum for—
Standards Branch, Procurement Division, DCS LOG.
Standardization and Packaging Branch (M72), ONM.
Headquarters, USAF.
AFDDS–1, DCS/Development.

Subject: The defense standardization program—Implementation of DOD Directive 4120.3.

Assistant Secretary of Defense memorandum of December 21, 1956, requested that certain information and data dealing with subject implementation be furnished within 90 days after issue date of that memorandum.

Among other matters, the memorandum requested information as to funds expended and personnel assigned for each of the following for fiscal year 1954, fiscal year 1955, and fiscal year 1956:

(*i*) Departmental standardization offices.

(*ii*) Subordinate organizational units down to, and including bureaus, services, and commands.

This particular information may not be as readily available as the other information requested in the memorandum of December 21. Hence, this particular information may be submitted as soon as it is developed but in any event, not later than April 25, 1957.

The reporting requirements described above with respect to funds and personnel are hereby assigned report control symbol DD–S&L(OT)575.

J. J. DUNN,
Staff Director for Standardization.

Mr. LIPSCOMB. Then it says "copies of implementing policies and procedures will be provided to the Office of Assistant Secretary of Defense, Supply and Logistics, as they are issued."

Have you received copies of the implementing policies from all of the services?

Mr. DUNN. Yes, sir.

Mr. LIPSCOMB. And do we have copies in our files of all the implementing policies and procedures that they have put into effect?

Mr. ECKHART. Mr. Chairman, we have copies of most of the implementing procedures of the Departments of the Army and the Navy, but not for the Air Force.

Mr. HOLIFIELD. Will you see that those are also furnished to the committee?

Mr. DUNN. I will be very glad to.

(The implementing directives of the Department of the Air Force are in the appendix as exhibit F. The Department of the Navy has published 59 implementing documents which are retained in the subcommittee files.)

Mr. HOLIFIELD. You see we intend to follow this up, Mr. Dunn.

Mr. DUNN. Surely.

Mr. HOLIFIELD. And if not during the balance of his year, why about the first of next year we will probably have this same group come up here, we will invite you to come up and give us a report on your progress during the year 1957, so we are serious about this and we want to keep track of it and we want to help you if we can.

Mr. DUNN. We will be very glad to provide those to you.

Mr. LIPSCOMB. I realize this is a different and complicated job and it has been going on a long time, but how long does it usually take to implement a directive that is sent out by the Secretary of Defense?

Mr. DUNN. The normal situation, Mr. Lipscomb, is for a directive to require the submission of implementing instructions within 30 to 90 days.

That is the normal situation with respect to these directives.

Now this document you will notice asks for the submission as they are completed, simply because it recognizes that what this document is undertaking to do is to establish within the supply organizations of the military departments a system which is not born wholly over any short period of time, so that we wanted the military departments, as they gained experience and issued further implementing instructions, to just submit them as they were developed.

There are heavy responsibilities in terms of implementing this program and establishing this system that we have been describing generally on the part of the departments, and we could not reasonably ex-

pect that they could do that within 30 days, 45 days, or 90 days, or perhaps even 2 years or 3 years.

So that that is the reason why the request for implementing instructions is stated in the manner it is in that directive.

Mr. LIPSCOMB. Do you have any plans for ever completing the implementation of this directive, or is it going to go on for years and years?

Mr. DUNN. No, it is not going to go on for years and years. I think this request Mr. Lanphier made recently is fairly good evidence that we feel a reasonable period of time has elapsed by which the department should have accomplished some considerable portion of this implementation, and we have identified the specifics of the implementation we think should be reasonably accomplished at ths point in time and have asked them to give us the evidence that they have so done.

Mr. LIPSCOMB. Have you found any part of the directive to be unrealistic or that perhaps needs to be implemented? Has there been any thought that perhaps there is soon to be a new directive?

Mr. DUNN. We do not presently have plans for any revamping of this directive; no, sir.

Mr. LIPSCOMB. One further thing that I believe is important and that is to get the program underway and to keep it effective.

Under No. 10, Organization, it says "Each military department shall establish the necessary organization required to carry out effectively its responsibilities under this program."

Is that one of the things that has been completely implemented or is that one of the things with which Mr. Lanphier is concerned with?

Mr. DUNN. This is another one of the things Mr. Lanphier is concerned with, and it is also the specific item I talked about the first thing this morning.

Mr. LIPSCOMB. Isn't that one of the most important sections of the directive? If you don't have an effective organization, it is not established how you can do the job.

Mr. DUNN. That is so. I agree that it is a very important provision of this directive.

Mr. LIPSCOMB. And you can't say today that each military department has established the necessary organization?

Mr. DUNN. I can say, and I thought I made this clear earlier this morning, they have established the organizations.

Whether improvements can be made in the organization there are the reservations I expressed yesterday and repeat this morning.

Mr. LIPSCOMB. Have they established them on paper?

Mr. DUNN. No, no; they are operating, they are operating established organizations.

Mr. LIPSCOMB. To effectively carry out its responsibilities under this program effectively?

Mr. DUNN. Right. I am talking now about the establishment of organizations. They have been established, they are operating. I have in a specific situation a specific reservation with respect to the effectiveness, is what I am saying.

Mr. LIPSCOMB. And it is so organized and staffed?

Mr. DUNN. Right, with respect to the staffing as I said this morning, I have a specific reservation in one quarter.

Mr. HOLIFIELD. Do you believe that you will be able to report to us when you come before us next time that this basic implementation will have been carried out?

Mr. DUNN. I sincerely hope so, sir.

Mr. MINSHALL. Mr. Chairman, if I may make one general observation.

Mr. HOLIFIELD. Mr. Minshall.

Mr. MINSHALL. In Mr. Dunn's testimony of yesterday he gave what I too interpreted as an optimistic picture of this entire situation. Yet again today he comes in here and freely admits that many facets of the program are not firmly locked up and they really do not know in which direction they are going.

Yesterday he also made a statement that he thought this program would be finalized in probably 1964.

Mr. DUNN. Certain features we set terminal dates for.

Mr. MINSHALL. You said it would be finalized in 1964, and I just wondered in view of your testimony today whether or not you still think that time limit could be reached and the program could be completed in 1964.

Mr. DUNN. I have no reason to change that testimony at all, sir.

Mr. MINSHALL. I would like just for the record, Mr. Chairman, to have Mr. Dunn's testimony of yesterday and today reconciled in the record so we could have some comment on it and just see where the discrepancies are, if we may.

Mr. DUNN. I should like very much if there have been any contradictory pieces of evidence given by me to be afforded an opportunity to reconcile them.

Mr. HOLIFIELD. You will be afforded an opportunity to look at the transcript as soon as the committee gets it. This is an entirely friendly inquiry, as you know.

Mr. DUNN. Surely.

Mr. HOLIFIELD. And we are anxious to get the record accurate. We are not anxious to catch someone in an inadvertent error. You will be given an opportunity to file any additional letter in regard to that, if you feel that something needs clarifying for our purposes, Mr. Dunn.

Mr. DUNN. Very good. (No further information was submitted.)

Mr. ROBACK. May we have at this time an estimate of the cumulative costs of standardization to date, and an estimate of the cost of the preparatory work under the work schedules that are projected?

Mr. DUNN. I don't have figures at hand.

I will provide them to the committee.

Mr. HOLIFIELD. Before you fulfill that request, and I think it is a good request, we would not want you to become involved in a tremendous task of bookkeeping on that.

We would like to have an intelligent estimate without the necessity of completely tracing all these time man hours and so forth which you have given us.

Mr. DUNN. I appreciate your concern because it is a very realistic one. We must rely pretty extensively on estimates in this situation at our present stage, so that the best estimates we can get we will be glad to provide.

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Mr. HOLIFIELD. And then state them as an estimate please when you furnish them.

Mr. DUNN. Right.

(The information supplied is as follows:)

ESTIMATED COSTS

Estimated accumulative cost of standardization[1] to date (from passage of Public Law 436, July 1, 1952, through December 31, 1956): $71.6 million.

Estimated cost of the "preparatory work"[2] under the work schedules that are projected (starting with fiscal year 1956 and up through and including fiscal year 1958): $8.8 million.

Mr. GAY. Mr. Chairman, before you finish with us, I would like the opportunity to make a few remarks.

Mr. HOLIFIELD. Mr. Gay, because we did not have a chance to question you yesterday on your statement, we did have some questions that we wanted to ask you.

Is there something you would like to say before we start our questions?

Mr. GAY. Well, I would like to say first that I agree very sincerely with the program that we have developed to implement Public Law 436. As I sit here and listen to your questions and to the testimony, I get the impression that you might think that we are doing nothing in effecting real standardization in the military departments.

That is an impression I would not like to have apparent. Standardization to me involves improved logistics support to our troops and the saving of money.

In an operation as large as the Department of Defense, that work has to be carried out in a systematic manner. That does not mean that there is not an awful lot of work going on. I am tremendously impressed as I get out in the field with standardization efforts at the various bureaus, services, and commands.

There are literally hundreds of standardization actions taking place almost daily.

Now they may not be across the board, but to me they help each of the services to support their troops, and they save money, and I think it is important to recognize that.

Here we have 3 million-odd items that we are trying to reduce the variety of to the extent we can, which is fine and is good across the board. To the extent that any service bureau or command can accomplish the thing within its own responsibilities, I am all for it. I

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[1] "Standardization" as used here includes all efforts and costs associated with the:
1. Collection, compiling, and evaluating data preparatory to standardization studies.
2. Physical inspection of items (parts, supplies, equipments, materials, and services) incident to standardization studies.
3. Development of new "standard" items or altering existing items, including the related efforts in design, development testing, and evaluation.
4. Development, preparation, and coordination of all specifications, standards, handbooks, standardization manuals, and indices.
5. Laboratory or field testing of items to obtain performance data for use in preparing specifications and standards, including research and development cost incident thereto.
6. Development of standard test methods.
7. Coordination of industry and other Government standards and specifications.

[2] The term "preparatory work" means the cost of planning for the new phase of the program, including the development and coordination of detailed plans which began in fiscal year 1956.

just wanted everyone to understand there is an awful lot of good work going on in the field and I am conscious of it.

We publish to you in reports to the Congress facets of those accomplishments. I can't list them in detail but the engineers at Belvoir have got a tremendous automotive program going on.

The Detroit automotive in Detroit has a tremendous program going on out there and they are tremendous accomplishments and I want the committee to understand there is a tremendous lot of accomplishment in this whole field of standardization going on. That is all I have to say, sir.

Mr. HOLIFIELD. Thank you.

Mr. ECKHART. Following up on those comments, Mr. Chairman, I wonder, Mr. Gay, if you could clarify for the record what the standardization program is under Public Law 436, which is referred to as the defense standardization program, and what the standardization projects are, which are referred to as the existing phase, and how projects become part of the existing phase outside of the new program?

Mr. GAY. I will try to.

The old standardization, the old phase as we call it, of the standardization program is the type of standardization that is used in industry.

In industry we always wait until we get ourselves in a jam before somebody gets the idea; well, the reason we are in this kind of a mess is that we did not standardize somewhere along the line.

Many of the projects either come about for that reason; they come about because of the initiative perhaps of an officer, or an enlisted man who sees room for standardization and has a chance to try out his ideas, wherever he may be stationed.

There are projects that are brought about by GAO investigators, who in the course of their travels run into things that appear on the surface to them as creating unnecessary varieties of things in our supply systems.

For years those projects were worked on both by the individual military departments or by one of the departments coordinating efforts of the other two.

We have something like 2,900 of those projects going on under our old phase of our standardization program.

Now those involve not only standards as such, a limitation of the things that we can buy; they involve writing new specifications, revising old specifications or canceling specifications.

They involve the production of qualified products lists.

Those are all included in the old phase of our program.

Now the new phase is a more systematic approach to this whole matter of standardization. It recognizes that the time, effort, and money put into projects already in the works, we just cannot slough them off and say, "let's start from scratch. Let's utilize what existing knowledge we have accumulated, and phase that into the new program in its proper place."

In the assignment of responsibility in the field of standardization, there have been different definite changes from the organization currently having responsibility for standardization under the old phase and that responsibility assigned under the new phase.

Depending on the state of the action that is being taken, the project is either completed or that knowledge is made available to whomever

the new assignee may be made. It is an attempt at orderly transition from the old phase to the new.

Mr. ECKHART. But has not much of that work been in progress prior to the passage of Public Law 436?

Mr. GAY. I don't know. I would have to look it up.

Mr. DUNN. I think I would like to supplement what Mr. Gay has said in a couple of regards. A great portion of the work under the old phase of this program perhaps was—well, at the time Public Law 436 was passed, it is possible there are some projects on the books which were on the books at that time, let me put it that way.

The arrangement for integrating these two efforts is very simple. When a class is considered for the recording of the detailed plan by which standardization of the whole class will be accomplished, projects in that class which are in existence are integrated into the plan, and the normal situation is that they are continued to completion in accordance with the schedule for the class. The normal situation likewise is that the department carrying responsibility for the project would carry it also to completion, but that need not necessarily be so.

Mr. ECKHART. The point that I am trying to make here, Mr. Dunn, is that during your presentation credit was taken for much work that was in process or was a continuation of work that started before Public Law 436 was passed, or not particularly in response to the mandate contained in Public Law 436.

Mr. DUNN. Let me suggest this: That the illustrations which are provided in my presentation, the specific illustrations to demonstrate some of the possibilities of simplification and again technical analysis, were included for the purposes of illustration.

Whatever testimony with respect to status and progress was presented in my testimony was contained on the second to the last chart of my presentation.

If I created an impression different from that [pointing to chart], that is what was represented in terms of status and progress in my presentation.

Mr. ROBACK. What has happened here, Mr. Chairman—I want to be corrected if I am wrong—is that when the cataloging program started, the Defense-wide cataloging program had to contend administratively and ideologically, you might say, with the existing program.

The Navy was very proud of its own cataloging program. You were trying to graft on to that or to take over the separate service efforts.

Now the same thing apparently is going on in the standardization program. Each service has its program. You are trying to organize a Defense-wide program. The accomplishments to date that you cite are based upon the old programs. It was contemplated that at a certain terminal date these existing projects would be integrated into the new program.

According to your schedule, the two programs will be indefinitely coterminus.

Mr. DUNN. Five years coterminus, as I suggested yesterday.

Mr. GAY. Yes; but is it bad that we contribute to those programs?

Mr. ROBACK. The question is whether you are following the mandate in Public Law 436?

Mr. DUNN. I would like to be clear on this as to what is represented. This is what I represent as the status and progress, and all that was intended to be represented in that area in my presentation yesterday.

If we could go back here, you may recall that I divided my talk into five sections, one of which was entitled "the Techniques of standardization," and in explaining that, I illustrated it by examples.

I did not intend for those examples to be received, if you like, as testimony of progress. This is our status in progress here, and it is quite clear to me that we identify the old phase in terms which are meaningful to us in our presentation.

Mr. HOLIFIELD. Can I ask one question on that?

Mr. DUNN. Yes, sir.

Mr. HOLIFIELD. When you say 2,295 projects are completed in the old phase, and then you say in the new phase 97 of the FSC classes are activated, do the FSC classes correspond to the projects, or are those individual projects in FC classes?

Mr. DUNN. These projects could exist in any of the 500 classes and whether or not they might be in one of these classes depends on whether there is a project in the particular class when it comes up for attention.

Mr. HOLIFIELD. I see; so where you said the new phase has 97 FSC classes activated, we really do not know how many projects are in those classes, do we?

Mr. DUNN. Not without specifically researching it.

Mr. HOLIFIELD. So the numbers are not a true comparison?

Mr. DUNN. That is right.

Mr. HOLIFIELD. That is the point I am trying to bring out.

Mr. GAY. There might be 3,000 projects in those classes.

Mr. HOLIFIELD. Where you say one detailed plan submitted, what does that one detailed plan comprehend?

Mr. DUNN. Well, it includes an identification of all of the projects which the department submitting it foresees a requirement to complete, and if in that one class there are among the 2,295 projects, projects in that class, those projects will be contained in the detailed plan and scheduled appropriately in accordance with their importance.

This process goes on continuously as you go through each of the five-hundred-odd classes, so that in time, as I suggested yesterday, the number of these projects should decrease as time goes on.

From 2,295 to 1,791 is a reflection of the fact that individual projects are being incorporated into detailed plans as time goes on.

That is the scheme of integration.

Mr. ROBACK. That time is important. By the end of June of 1956, at the end of fiscal year 1956, there was a contemplation by your office that 75 percent of those projects would be completed?

Mr. BOYLAND. Let me add the impression that these are continuing projects that started 10 years ago and the same projects are——

Mr. ROBACK. Let me put it this way.

It was contemplated in your department that by the end of 1956, 75 percent of the existing projects would be completed; is that a correct statement?

Mr. DUNN. That is so.

Mr. ROBACK. Now wherein has that changed in the time sense?

Mr. DUNN. The percentage change?

Mr. ROBACK. I mean, have you met, by the end of 1956, 75 percent?

Mr. BOYLAND. Essentially 75 percent of the projects that were on the books at the time that that directive was issued were completed.

Mr. ROBACK. But new ones came along?

Mr. DUNN. New ones came along.

That is right.

Mr. ROBACK. That directive was not contemplated to integrate 75 percent of the system?

Mr. DUNN. No. This was to set an objective for performance.

Mr. BOYLAND. Speed up the completion of the existing projects.

Mr. FASCELL. May I ask a question?

Mr. HOLIFIELD. Go ahead.

Mr. FASCELL. Why do projects keep coming up?

Mr. DUNN. They are not the same projects, sir, they are different projects.

Mr. FASCELL. I know, but that does not make any difference as I see it. If you have got projects which you are handling under the old system, why do they keep coming up?

Mr. DUNN. Because life goes on just the same.

Mr. FASCELL. I understand that, sir, but they are not all programed simultaneously. Somebody has to take them in order, and if they are old projects that are not on the book and they are not getting around to them until 1958, why not take them up under the new system by classes?

Mr. DUNN. That is exactly what happens.

Where they are not completed at the time the plan is prepared, they are integrated into the plan.

Mr. FASCELL. I understand that but I can't reconcile this with the statement that new projects keep coming up under the old system.

I don't see how that is possible.

Mr. DUNN. Because the project which is new does not lie in the area of a class which is receiving attention.

Mr. FASCELL. At that moment?

Mr. DUNN. At that time; yes, sir.

Mr. HOLIFIELD. I see no conflict in my own mind.

Mr. FASCELL. I do.

Mr. HOLIFIELD. I think I understand.

Mr. FASCELL. They have a schedule for classes, but in the meantime they are undertaking individual projects that might go across a whole field of classes?

Mr. DUNN. That is so.

Mr. GAY. But it might be a small segment of a class. It might be something whose relative importance has changed almost overnight.

Mr. FASCELL. So what you are saying in effect is that while you have a nice plan all laid out to do this thing by classes and by priorities, you still have an open gate whereby you can pick out specific items as long as the three military services get together on it?

Mr. GAY. We or somebody else.

Mr. FASCELL. Sir?

Mr. GAY. We or somebody else.

Mr. FASCELL. I got three different answers down the table, so I would like to get it clarified.

Mr. DUNN. I gain the impression you are distressed at this situation.

Mr. FASCELL. No; I am not distressed. I am just trying to find out what the situation is.

Mr. DUNN. Let me see if I can illustrate it. Here we have one class at the end of 1956.

As suggested the other day, it is railroad cars or some such thing as that.

Mr. FASCELL. Detailed plan means that the department assigned the primary responsibility under the directive has completed a full plan which includes old projects and new projects and everything else?

Mr. DUNN. Right.

Mr. FASCELL. And they have got it laid out right to the last degree?

Mr. DUNN. Yes, sir.

Mr. FASCELL. And established a priority?

Mr. DUNN. Yes. So we now at this point in time of this hypothetical situation, we have a detailed plan for railroad cars. The Bureau of Ships wants to buy some valves, and in order to procure effectively they require a specification for valves.

Mr. FASCELL. Is this a new item or an old item?

Mr. DUNN. It is presumably a new item if there is no specification for it. But the fact that we have a detailed plan for railroad cars is not going to help the Navy at all in its situation.

The Navy must procure, they must have a document which will permit them to procure. A project to develop this specification for this valve is initiated to meet an existing requirement.

Mr. FASCELL. Is this project under your department?

Mr. DUNN. Yes.

Mr. FASCELL. Or by the three military?

Mr. DUNN. It depends upon the nature of the project that requires development. If it is developed on a limited—we have two types of specifications, those which are fully coordinated among all three departments which have an interest in the item, others which are developed and used initially by only one department having an immediate procurement need and not having available perhaps the time to coordinate.

Mr. FASCELL. And they may or may not have across the board——

Mr. DUNN. And they may or may not have interest elsewhere, so it could be either of those types, a limited coordinated or a fully coordinated spec.

Mr. FASCELL. This, in your terminology, is a project?

Mr. DUNN. Yes, sir.

Mr. FASCELL. It does not necessarily mean, however, that it was existing, that it was a project which was under the old plans. This is an entirely new matter?

Mr. DUNN. That is right.

Mr. FASCELL. So when you are talking about projects, you are talking about projects which are newly developed under your own escape clause, and projects which existed?

Mr. DUNN. Both of them.

Mr. FASCELL. Right.

All I am interested in is projects which existed which have not yet been reached.

Now, if they are listed somewhere as something that you are going to do in the future, why in the world get to them? There is no urgency. It is just something that you would like to get done.

Mr. DUNN. There is a basic presumption if there is a project in existence, that there is a requirement to complete it, because under the old arrangement we did not undertake work for which there was no immediate requirement.

Mr. FASCELL. I understand that. There is a requirement to complete this whole thing.

Now, in the example that you have given us with respect to the valve on an immediate procurement, I can see some sense and reasonableness to the idea of establishing that as a project and not wait until you get to the class.

It would be ridiculous, but where you have 1,000 projects under the old setup whereby the military were all going to get together and work this thing out, and they have only gotten to 550 of them at this point, why continue to carry the other 450 as separate projects when in your own schedule of work you are going to take this thing up by classes anyway?

Mr. DUNN. I am not sure that I follow completely what you are driving at.

Mr. FASCELL. Thank you.

My colleague follows me here. I am glad somebody does.

Mr. DUNN. He has an advantage over me apparently.

Mr. FASCELL. Let me go back and maybe since I am not getting through to you, maybe I can in another way.

You say an old phase on the chart, right?

Now as I understand it, old phase meant the system prior to Public Law 436 whereby under a standardization program, the three military departments got their heads together and tried to work out a standard; right?

This is "old phase"?

Mr. DUNN. Right.

Mr. FASCELL. Now you say you have completed 2,295 projects under the old phase?

Mr. DUNN. Yes.

Mr. FASCELL. The natural question is at the time that this new system came into effect, how many old-phase projects were on the books?

Were there 10,000, 50,000, or——

Mr. DUNN. No; it is roughly in the order of magnitude of 2,000 projects according to my recollection.

Mr. FASCELL. That does not seem right because you completed under the old phase in 1956, 2,295, and in 1958 you expect to complete 1,791. If you add all of those up, you get 5,000.

Mr. DUNN. Yes, and what do you conclude from that is what I am puzzled by.

Mr. FASCELL. I conclude you had 5,000 projects at the beginning of 1956.

Mr. DUNN. That is not so, because the bulk of the projects as we establish them over time are new projects.

Mr. FASCELL. But you are doing it according to this status report under the old-phase setup.

That is exactly what I am getting at.

Mr. DUNN. Sure, and that is because we have a requirement for a document in an area where we do not have a detailed plan.

Mr. FASCELL. Was this requirement a new requirement or an old requirement?

Mr. DUNN. No; normally a new one.

Mr. FASCELL. Now you have really got me fouled up.

Mr. ROBACK. Mr. Dunn, may I observe before you make a comment that if they had set up this new system with the proper priority schedules, all these old projects which presumably represent need, importance, or urgency, would be followed out under the new program.

What they have done with the new program is survey the universe of items in the system and divide them mechanically up by classes.

Actually there is no urgency recognized in a division of labor like that.

Mr. FASCELL. They just got through saying urgency is recognized because they have developed specific new projects on an item as a procurement need arises.

Mr. ROBACK. Under the old system.

Mr. FASCELL. No, sir; this is under the new system.

It does not make a bit of sense, we are talking about administrative esthetics, if you please, but the same point also might indicate something here which I would not like to see indicated but I see it all the time when we talk about the three military and the DOD, and that is basically this: That at the time you started on the new system of standardization, if you had in existence at that time 10,000 projects which the three military thought that they would like to phase-out, and they were going to work on, and it would take 15 years to phase-out 10,000 projects, there cannot be any urgency or immediacy.

It is just something they would like to accomplish. The question naturally arises then that when you start in on a new program of standardization in which you lay out this whole thing by classes, and priorities, that you just do not integrate the old projects into the new phases, and forget about the old ones as projects to be handled individually?

Mr. DUNN. If you are suggesting that there may be some projects at the time you come to prepare a detailed plan which have been overtaken by events in terms of its need, that is a possibility, and in that situation we expect the Department to cancel out a project.

That is a possibility.

Mr. FASCELL. Just cancel out and wait until you get to it in the class study?

Mr. DUNN. I say in connection with the class study——

Mr. FASCELL. Yes?

Mr. DUNN (continuing). If events have overtaken the need for a project, we would expect that the plan would provide for a cancellation of that project.

Mr. HOLIFIELD. Mr. Boyland, you have a quizzical expression on your face. Would you like to contribute to this discussion?

Mr. BOYLAND. I think we have gotten into a little bit of semantics that I would like to take a whack at to see if I can explain.

The first thing I would like to clear up is phase, without regard to projects.

The term "phase" does not have a connotation of time in our definition. "Phase" simply means the method of doing business, and the method was, as Mr. Gay described, similar to what happens in industry when you have got a problem, you solve it. That problem can consist of a number of kinds of things.

One of them is getting the three departments together on solving a problem of standardization, and those kinds of problems make up possibly under "old phase" 20 percent of the projects.

The chief work done under the "old phase" involves the keeping current of some 10,000 existing coordinated specifications of Federal and military specs.

We have got 10,000 coordinated documents. Times change. They have to be brought current, packaging projects influence them, new items influence them, so just to keep 10,000 specifications up to date requires roughly 2,000 projects to amend and revise these specs to keep them current.

That is a continuing workload, and they will be called old phase only until the time when, as in the case of textiles, a plan is achieved, and then the part of these 2,000 that is necessary to keep them current will just by virtue of having a plan and having an assignee become a new phase.

The same work goes on, so the time factor involved in phase is a misconception. It is really old system, new system.

Mr. HOLIFIELD. In other words, during this transitory period you must have a continuation of function in those departments?

Mr. DUNN. Yes.

Mr. BOYLAND. Sure.

Mr. HOLIFIELD. And you label it "old phase" because you have not yet achieved your ultimate goal?

Mr. BOYLAND. You name it "old phase" because we have not got his nice plan where the man we put our finger on is going to do the work. This is done by the person who needs it. It may be that one department is in procurement position on an old specification today, and the specification is out of date so it has got to be changed.

They put the project up, but they do not do it only for themselves once it is a coordinated specification.

They get everybody in on the act. That is why it becomes one of the projects.

Mr. FASCELL. This answers part of the question, but it does not get down to the basic thing which deals with the standardization of an item.

Mr. BOYLAND. The standardization of an item under the old phase; O. K.

Mr. FASCELL. Is it still continuing today? That is all I want to know.

Mr. BOYLAND. Only when there are critical situations that come up that precede the establishment of a detailed plan. We do not establish phantom projects.

Mr. FASCELL. This is not an old-phase project then?

Mr. BOYLAND. It is not in the case of time an old phase. It is an old-system project. We are not putting it in with all the things in a class.

Mr. FASCELL. This is an exception to your detailed plan?

Mr. BOYLAND. Right; in effect, and it comes before the detailed plan. When a detailed plan comes up, even though we may have valves in the valve class scheduled for 1957, if a project comes up, we will do it, too.

Mr. FASCELL. But it has nothing to do with the idea that valves are scheduled under the old system?

Mr. BOYLAND. None at all.

Mr. FASCELL. Now the only question I need to have definitely answered is at the time we went into the class system of standardization, did we have a list of individual projects which the military hoped to get to at some time, and are we still working on that list of projects unrelated to any immediate emergency or procurement needs at the present time? That is all I want to know.

Mr. BOYLAND. The answer is "No."

Mr. FASCELL. O. K.; thank you.

Mr. DUNN. You have made a real contribution.

Mr. HOLIFIELD. Mr. Eckhart?

Mr. FASCELL. I worried about nothing.

Mr. ECKHART. Mr. Gay, a few moments ago you referred to the semiannual reports submitted to the Congress under Public Law 436. I would like to go back to one of those covering the period January 1 to June 29, 1953.

I realize it is a little dated, but in that report they indicated that the program for the conversion of Army, Navy, and Air Force specifications to military specifications was ahead of the scheduled completion date of July 1, 1955.

In view of the number of specifications and 3 million items that we have in the supply system, could you shed some light on what was behind this particular statement at the time it was made?

Mr. GAY. I am sure I could not.

Mr. DUNN. I perhaps can. The system of documentation we described here, we indicated we were using military and Federal specifications and standards.

The program that is touched on in that report relates to the conversion of what were a different series of specifications in use by the military departments which were departmental in character.

I have forgotten the precise date, but it was when the Secretary of Defense was General Marshall.

An instruction was issued to the military departments to complete the conversion of all of these local standards or specifications, if you like, to the series which we have been talking about, the military or Federal series.

The reference in this report is to the status of the program leading to that conversion, and it was completed on schedule as of July 1, 1955, so that we do not have and use any longer Navy Department specifications as an example.

We have either limited coordinated military Federal specifications or fully coordinated or limited specifications.

Mr. ECKHART. Could you give us the termination date for completion of all specifications in the departments?

Mr. DUNN. Again this particular reference is to a program to correct a situation where a series of documents was in use which is not now in use and this specific program is completed as of July 1, 1955, so that the problem of local specifications is not a problem as of this point in time.

And it was completed as of the due date. Now, when you ask when all specifications will be completely written, I suppose they will be completely written when all procurement stops. That is the best answer I can provide.

Mr. ECKHART. But in terms of the completion of your standardization program, the writing of the specifications is going to be pretty much coterminus with that?

In other words, you won't have specifications for many of the items in the military supply system for another 10 or 15 years?

Mr. DUNN. That is possible, and there may be some situations where we might not even write a specification because of circumstances surrounding the item.

But the specifications that are required have to be written when they are required, either under the old procedure or under the new, and the development of needed specifications is an implicit responsibility of the department having responsibility for monitoring the standardization going on in that class.

Mr. ECKHART. Could we get away from this subject and get back to your fiscal-year plans?

You people at defense level developed a program for fiscal year 1956. That was made available to the services some time in August, I believe, which was 2 months into the fiscal year.

Was that program completed by the military departments?

Mr. DUNN. No.

Mr. ECKHART. What was the reason for its noncompletion?

Mr. DUNN. There are several, and I think most of them are in the record as of yesterday.

One is, as you yourself just indicated, the program was in their hands 2 months after the fiscal year started.

Mr. ECKHART. Do funds or personnel have any bearing on it?

Mr. DUNN. They do, indeed, have a very direct bearing on it. As I pointed out yesterday, when we took our first review of performance under that program at the end of December 1955, we found that performance was abysmally short of what the schedule provided. And again, as I pointed out yesterday, in the light of that, we went into the exercise of having Mr. Wilson direct the application of the needed resources to this program in specific terms so that it could be gotten back on the track.

Mr. ECKHART. As I recall, Mr. Wilson directed that the noncompleted portion of the 1956 program together with the 1957 program should be completed by the end of fiscal year 1957?

Mr. DUNN. Yes, sir.

Mr. ECKHART. Who prepared the fiscal year 1957 program?

Mr. DUNN. The Assistant Secretary of Defense, Supply and Logistics, issues each program.

Mr. ECKHART. Was that program completed?

Mr. DUNN. The fiscal year is not completed yet, Mr. Eckhart.

Mr. ECKHART. But I mean in terms of anticipated work over the first part of fiscal year 1957.

Mr. GAY. I put that in the record yesterday. The whole program is in the record.

Mr. DUNN. This is the status, as I suggested yesterday, in the 1957 program, the fiscal 1956 program and the 1957 program, and you will find with respect to the old type of projects there is a reasonable correspondence in the first 6 months between schedule and performance.

With respect to the new phase of the effort in terms of submission of detailed plans, there were 19 scheduled, of which 8 have been received. And as I suggested earlier this morning, to give you a true picture of this, there should be added to this class and also to this group the 31 textile and subsistence classes for which we have this special procedure which has been going on for some time, in terms of substance of standardization involved.

Mr. ECKHART. Was the fiscal year 1957 program revised somewhere along the line?

Mr. DUNN. Yes; it was revised at the same time that the fiscal 1956 program was revised early in the spring of 1956.

Mr. ECKHART. Why was that program revised?

Mr. DUNN. To draw a more realistic relationship between what was desired and what was feasible of accomplishment in view of the lapse of time.

There was almost a complete fiscal year lost in getting resolved the problems of applying resources needed to support the program.

Mr. ECKHART. Was that not based on reports from the military departments that they could not reprogram sufficient resources to complete the original fiscal year 1957 program?

Mr. DUNN. No. That was a consideration, but so far as that consideration is concerned, the position of the Office of Secretary of Defense is identified in Mr. Wilson's letter, that we want a program which is feasible of accomplishment to be brought current in accordance with that letter.

Mr. ROBACK. You took special steps during the last fiscal year to try to bring the schedule up to date, did you not?

Mr. DUNN. How do you mean, sir?

Mr. ROBACK. What was the function of the program and scheduling committee?

Mr. DUNN. We took special steps to bring into our planning these fiscal-year programs as much knowledge as we could bring directly to bear on the subject. We did set up in connection with that a program and scheduling committee.

Mr. ROBACK. That committee represented a special effort to get these military departments to come in with their scheduled plans for the fiscal year?

Mr. DUNN. It represented a special effort to make certain that the intelligence with respect to resources available where they were available and generally the capabilities of the departments to perform was in our hands at the time that we developed our fiscal-year programs.

Mr. ROBACK. What happened to the committee?

Mr. DUNN. It is still in operation and the committee is meeting this week, as I suggested yesterday, to go to work on the 1959 program, and such adjustments as might be appropriate in the earlier years.

That committee is a continuing committee.

Mr. ECKHART. What I am making reference to here, Mr. Dunn, is a memorandum for the Assistant Secretary of the Navy for Material prepared by the Chief of Naval Material which indicates in paragraph 4—the date on this is May 23, 1956—

When early returns from all three military departments indicated that the schedule originally proposed for fiscal year 1957 would not be met by any reasonable expansion of manpower and money expenditures, the Office of the Assistant

Secretary of Defense, Supply and Logistics, established a joint Department of Defense standardization program and scheduling committee.

This scheduling committee developed what they called a balanced program or a balanced schedule.

The committee was working on another schedule for fiscal year 1958. Could you confirm or deny this material here?

Mr. DUNN. I do affirm that there is such a committee and that they have the responsibilities I have identified.

Mr. ECKHART. I mean with respect to the inadequacies of both funds and personnel?

Mr. DUNN. Yes; I have just finished saying that one of the reasons why it was necessary to make such a radical adjustment in the fiscal year 1956 program was the nonavailability at that time of the resources required, which includes your dollars and your ceiling.

Mr. ECKHART. You indicated that was just one of the many considerations, whereas this indicates that it was a primary consideration. The point that I am trying to develop here, Mr. Dunn, is whether the Department of Defense is preparing schedules and requesting the military departments to conform or to comply with those schedules, or whether the schedules are so unrealistic and so flexible that if the military departments cannot reprogram their resources, that you people are revising your schedules, and thereby slowing the program down in a rather material way.

Mr. DUNN. We have in this programing exercise a terminal date in mind, as I have already indicated, of achieving the development of all of the plans for the five-hundred-odd classes within a 5-year period.

We have that objective in our mind. We recognize likewise that it is simply not feasible to expect to do that total job in 1 year.

Mr. ROBACK. You mean it is 5 years for the detailed plans to be finished?

Mr. DUNN. For all five-hundred-odd of them; yes.

Mr. ROBACK. In other words, which represents the end of the preparatory work?

Mr. DUNN. It represents the completion of the plans for all of those five-hundred-odd classes.

Mr. ROBACK. In other words, the law was passed in the middle of 1952.

You are now about to complete the division of the labor, and in another 5 years you will complete the division of the plans specifying how you will go about standardizing items?

Mr. DUNN. That is one feature of performance which is accurately stated. There is an implication in the statement, however, which I think we ought to have clear on the record.

The completion of detailed plans is scheduled as you described. Once the detailed plan is approved, such as in the case of this one item here, for example, as of the end of fiscal year 1956, projects with respect to standardizing in this class were underway and being pursued to achieve standardization in this particular class. The plan for this class will be revised each year between now and the 5 years, and also 10 years and perhaps 15 years, to keep current with what the requirements with respect to that class are.

So that extending it further into the next year, work if we are on schedule will be going on in 64 different classes on a continuing basis to meet our standardization requirements.

To put it in focus again, this business of detailed plans is not a measure of standardization and accomplishment.

The device of plans is an administrative device to facilitate management of the effort.

The measure of what is accomplished is what is performed pursuant to the plans, and I want to be certain that that is clear.

Mr. HOLIFIELD. The point you are making is that there is performance before the plan is submitted and accepted?

Mr. DUNN. No; the point I make, Mr. Chairman, is that performance begins with the approval of the plan.

Performance under the plan begins with the approval of the plan.

Mr. HOLIFIELD. But there has been activity before that, hasn't there?

Mr. DUNN. Yes.

Mr. HOLIFIELD. Under standardization?

Mr. DUNN. Right; under the old phase of the program.

Mr. FASCELL. You just integrate those projects which have already been completed within that class?

Mr. DUNN. That is right.

Mr. FASCELL. And then you start off with whatever new ones you want?

Mr. DUNN. Whatever additional is required.

Mr. FASCELL. Then actually classes activated is not a true measure of accomplishment except from an administrative standpoint?

Mr. DUNN. That is right; these are controls which we are identifying here which give an indication of how we are progressing.

Mr. ROBACK. Mr. Dunn, you are trying to convey the assurance that even though it would take 5 more years to get the plans approved, that on some plans already approved some work is going forward?

Mr. DUNN. That is so; yes.

Mr. FASCELL. That is because standardization on projects goes on every day?

Mr. DUNN. And standardization under approved plans goes on every day.

Mr. FASCELL. On those which have been approved and submitted and activated?

Mr. DUNN. Right.

Mr. FASCELL. All right, sir.

Now that raises this question.

Since individual projects are continuing every day, what is the relationship between the projects, individual projects of standardization, as against classes?

Mr. DUNN. The unit of work, if you like, in standardization we identify as the project. This has a limited scope which is identified to develop a specification or a standard.

The unit of work under our detailed plan, our new phase, that is the same. It is projects.

In terms of character, it is not possible to distinguish between a project under the old phase and under the new phase. They are identified areas of work.

Mr. FASCELL. So that when you say that you have completed 2,295 projects in 1956, that is your unit of measurement for all of 1956?

Mr. DUNN. That is right.

Mr. FASCELL. The other stuff is administrative?

Mr. DUNN. Right.

Mr. FASCELL. And that would be true for 1957 obviously, 1,259 projects?

Mr. DUNN. Yes.

Mr. FASCELL. Which indicates that in 1957 you are going to standardize fewer items than you did in 1946, which may or may not be—and I do not mean to cast any inference, because in completing those projects you may have had to eliminate 20,000 items as against only 10,000 in 1956, so there is no inference to be drawn as between the projects completed in 1 year.

Mr. DUNN. That is right.

Mr. FASCELL. And the projects completed in another?

Mr. DUNN. That is true.

Mr. FASCELL. The only fair analysis would be to determine the number of units and the difficulty, engineeringwise, in order to establish a completed project.

Mr. DUNN. That is true. The number of projects in 1957 is broken into 2 periods here, so the total is not the 1,200, it is 1,200 plus 1,200.

Mr. FASCELL. Therefore it might not be logical or reasonable to assume that you are proceeding with this work on a class basis except administratively, because as a matter of practice, what you are actually doing is taking this thing project by project as a procurement need arises, and in addition thereto as you activate a class or are able to work on that, why you throw that in too.

But obviously by the necessity of your approach to this problem, your emphasis is on immediate procurement, and your deemphasis arrives on activated classes.

Mr. DUNN. We are striving to shift that emphasis to the standardization considerations in an entire class as opposed to the limited objective of a single project.

That is the purpose of this reorientation.

Mr. FASCELL. I understand that.

In other words, in my analysis then, you agree with my analysis when you say you are trying to shift the emphasis?

Mr. DUNN. Right.

Mr. FASCELL. And therefore there is a relationship to this whole program as to immediate procurement needs, which means that you are spending the greatest part of your time trying to keep up with those at the present time.

Mr. DUNN. That is a big portion of our effort; yes, sir, that is right.

Mr. FASCELL. Now, what I want from you is some kind of estimate as to how much of an impact this would have or is having on the orderly process of trying to do it according to a well-conceived plan which you already have?

Mr. DUNN. We have undertaken to continue without dislocation the establishment of our new system of operating, tried to superimpose that on the existing system of operating without dislocating what the existing system provided in terms of meeting our needs, but

to add to that effort such additional work as would come from the detailed plans for additional projects required in each of these classes.

Mr. FASCELL. Now, from the standpoint of proceedings properly and orderly, is this the best we can do, or should we do something else? My question, of course, is obviously we can do it this way because you are doing it that way.

Mr. DUNN. It is our view that this is the best method we can devise to achieve what we conceive to be the purpose of Public Law 436.

Mr. FASCELL. In other words, even if you had unlimited manpower and resources in order to proceed on standardization on the class theory, by class priority, you would still be faced with the problem of individual projects based on the current procurement needs.

Mr. DUNN. We cannot wish——

Mr. FASCELL. No way to escape that?

Mr. DUNN. We cannot wish them away; no, sir.

Mr. FASCELL. Therefore, any plan that is devised or any system that is used would have to take into consideration the immediate need of the military.

Mr. DUNN. Yes, indeed.

Mr. FASCELL. And that would have to be integrated into a standardization program that is in process, and that, in itself, cannot be considered as to delaying the standardization program?

Mr. DUNN. No, sir.

Mr. FASCELL. As a matter of fact, it is contributing to.

Mr. DUNN. That's right. It is all additive so far as we are concerned.

Mr. ROBACK. The inference ought not to be left, Mr. Fascell, that this administrative arrangement is the only way in which they could have planned a defensewide standardization program, because conceivably all those projects, on the basis of urgency and priority, could have been put in this program, and you would have a defensewide program operating.

There is a problem: How are you going to integrate? It does not follow logically that this is the only way you could have done it, because what you have done, as I said before, is, you have taken the whole universe of items, those that are important, those that are unimportant, those that move quickly, those that are dead, all are divided up, and it has taken 2 or 3 years to divide up that pie, and in the process they have got to go ahead as they have explained.

Whether that is the way it could be done or had to be done, and whether that is the objective and intent of the law, is a matter that reasonable people could debate.

Mr. FASCELL. Well, I can understand how there would be plenty of debate about it when you consider that they spent a year in getting out the directive. There was plenty of debate about it as far as time, but while I don't mind being critical about what happened in the past, I am sort of looking at what is going to happen tomorrow.

What I want to understand clearly is that the manner in which we are now proceeding is the best manner to complete the standardization review within the shortest possible time.

Mr. DUNN. We consider it so.

Mr. ROBACK. You couldn't hardly answer otherwise, could you?

Mr. DUNN. I don't know how I could.

Mr. HOLIFIELD. On page 4 of Mr. Gay's statement he made this statement:

We are faced with the need to recruit competent technical staff.

Mr. Lanphier said:

Our resources, both those currently available as well as those being budgeted are considered adequate to achieve our programs scheduled.

Do you consider, Mr. Gay, that there is any conflict in those?

Mr. GAY. No, sir; I don't.

Mr. HOLIFIELD. In other words, you are scheduling your program according to the amount of staff that you have?

Mr. GAY. Obviously.

Mr. HOLIFIELD. That is the way you reconcile?

Mr. GAY. Certainly.

Mr. HOLIFIELD. But you could have a better program if you had a more competent staff?

Mr. GAY. Yes, sir.

Mr. HOLIFIELD. And you also testified that there is money available providing you can find these people.

Mr. GAY. Yes, sir.

Mr. HOLIFIELD. On a reassignment basis?

Mr. GAY. Yes, sir.

Mr. FASCELL. Everybody is looking for engineers.

Mr. DUNN. That is true.

Mr. GAY. That does not mean that we can't retrain or provide a way of getting around that need.

Mr. ECKHART. But, as things stand right now, you are faced with a problem within the commands or bureaus or technical services of having them reprogram their existing resources and funds to complete this work.

Mr. DUNN. That is right; that is so.

Mr. ECKHART. Now, what relative priority has been placed on the standardization program, by either your office or by Secretary Wilson, which would indicate to the bureaus, technical services, and commands that this program is as important or a little more important than some of the other programs that are utilizing the resources which prevent the services from reprograming them for the standardization work?

Mr. DUNN. Mr. Wilson identified this as an economy program within the terms of his directive calling on the departments to accomplish a 6-percent reduction in their expenditures. With respect to identifying the——

Mr. FASCELL. Excuse me. Is that this fiscal year or next fiscal year?

Mr. BOYLAND. Last fiscal year.

Mr. DUNN. Last fiscal—I am referring to January 1956.

Mr. FASCELL. Very optimistic directive.

Mr. DUNN. Yes. The January 6, 1956, memorandum of Mr. Wilson's is what I am referring to. He laid the burden on each of the Secretaries of the military departments to reprogram.

He did not provide with that an identification of the relative priority of this program as opposed to the five-thousand-odd other pro-

grams that are operating, expecting that they would carry on instructions, and which they have, generally speaking.

Mr. ECKHART. Just to clarify the record, Mr. Dunn, were you talking about this directive of January 25, rather than the 6th?

Mr. DUNN. Yes. This is the one.

Mr. ECKHART. Within the framework of this directive, Mr. Dunn, there is no relative priority in terms of other projects.

Mr. DUNN. That is so.

Mr. ECKHART. In the military departments.

Mr. DUNN. That is so.

Mr. ECKHART. Do you feel that this program, first of all, merits a priority, and, if so, whether giving it a priority would result in the more orderly and more rapid completion of the program?

Mr. DUNN. Well, with respect to whether it merits it, there is no question in my mind but what it does merit a priority, and it is receiving a priority attention at this point in time.

If there is a merit to enumerating totally all of the programs going on in the Department of Defense and relating to a specific program, I am not sure even how feasible the thing is in the first place.

I think, perhaps, the business of priority is one more of form than substance. We have a way of getting a fair measure of performance on this thing pursuant to the program we have laid out. Whether there was in existence at the same time a relative priority for the program, I am not sure whether it would add substantively to our situation.

Mr. ROBACK. In other words, it had no budget priority. It merely had the priority that everybody is for standardization, so you say, or it has been said that it has high priority, but it has no budget priority.

The program is recognized as an economy program in that it can yield large economies. It has also been the victim of an economy program in that you cut down resources for performing that. Isn't that a fair statement?

Mr. DUNN. That is a reasonably fair statement, except that I think it is important to distinguish between the people who say this is a good idea. When Mr. Wilson says it, it has a considerable weight in what treatment it receives.

Mr. FASCELL. Mr. Chairman, going over here to the 1958 fiscal year, still on old-phase projects, Mr. Dunn, you say you are going to complete 1,791 projects?

Mr. DUNN. Yes.

Mr. FASCELL. In fiscal year 1958. Now, will you tell us how many of those are immediate procurement problems and how many of those are programs under classes that were previously activated?

Mr. DUNN. None of those are under programs for classes previously activated. Those are not identified in this chart.

Mr. FASCELL. Well, where would we find out what we are doing with respect to classes that have been activated?

Mr. DUNN. You would have to request that information, and I will be very happy to provide it. It is not portrayed in this chart.

Mr. FASCELL. All right, sir. It would seem to me that in order for us to evaluate this thing properly, we ought to have that information, because a thing like this would lead us to all kinds of incorrect conclusions.

Mr. DUNN. I will be very glad to give you a record of projects established or contemplated for establishment under the various plans which have been approved.

Mr. FASCELL. Obviously you go back to 1956, you say 97 classes activated, the question immediately arises, "Well, what did we do in 1957 with respect to the 97 classes that were activated?" This is what we ought to know.

Mr. DUNN. Very reasonable.

Mr. HOLIFIELD. Please supply those for us.

Mr. DUNN. We will be glad to.

(The information supplied is as follows:)

ESTIMATED PROJECT WORKLOAD FOR FISCAL YEAR 1957

The following is an estimate of the project workload under the Defense standardization program for fiscal year 1957: (July 1, 1956, through June 30, 1957):

Old phase (coordinated projects):	
Number in process at beginning of fiscal year 1957	2,441
Number completed or scheduled for completion	[1] 2,265
Number initiated or scheduled to be initiated	[1] 2,644
Number to be transferred to new phase	420
Number in process at end of fiscal year	2,400
New phase (coordinated projects):	
Number in process at beginning of fiscal year	0
Number planned for completion	[2] 0
Number planned for initiation	1,260
Number transferred from old phase	420
Number in process at end of fiscal year	1,680
Total number of coordinated projects expected in process (old and new phase) at end of fiscal year 1957	4,080

[1] These figures are based on the established fiscal year 1957 work schedule adjusted to reflect actual accomplishments during July–December 1956 and expected accomplishment during January–June 1957.

[2] Project completions are shown as zero, although some few completions may be expected. The number, however, will be negligible.

Mr. HOLIFIELD. Mr. Eckhart has one more question, I believe.

Mr. ECKHART. That is all, Mr. Chairman.

Mr HOLIFIELD. Thank you, Mr. Dunn. We are going to have to digest a lot of this testimony and a lot of these exhibits before we go much further with you, but I will thank you for the responsiveness of your questions.

Mr. DUNN. If I can assist in that digestion, you let me know.

Mr. HOLIFIELD. I think if we could go on now until 1 o'clock, I understand that the services have some short statements to make. Unless we get involved in extensive questioning, maybe we could start with them and go until 1, and finish up this phase of our hearings. Which one of the services do you want, Mr. Gay, to start first, or is there any priority?

Mr. GAY. I have no choice, sir.

Mr. HOLIFIELD. Let's take the Army first, because they start with "A" and it started before the Air Force did. Colonel, would you identify yourself? I didn't mean, when I made that statement a few minutes ago, that we were going to cut you folks short, but it may be that that will be all the time we will have today. We may have

to schedule another meeting, because we do not want to cut you short or be discourteous to you.

STATEMENT OF COL. ELDON A. KOERNER, CHIEF, STANDARDS BRANCH, PROCUREMENT DIVISION, OFFICE OF DEPUTY CHIEF OF STAFF, LOGISTICS, DEPARTMENT OF THE ARMY; ACCOMPANIED BY E. F. DeATLEY, ASSISTANT CHIEF, STANDARDS BRANCH; LT. COL. CRAWFORD D. LYONS, CHIEF, STANDARDIZATION SECTION; CLEO F. SNEAD, CHIEF, CATALOGING SECTION; ARMAND GAMMARINO, OFFICE OF THE COMPTROLLER OF THE ARMY; DONALD E. BOUSSIE, REPRESENTATIVE FROM DIRECTOR OF PERSONNEL OFFICE, OFFICE OF DEPUTY CHIEF OF STAFF FOR LOGISTICS; AND ERNEST L. WALKER, JR., DEPUTY CHIEF OF STAFF FOR LOGISTICS

Colonel KOERNER. We have a prepared statement, sir, fairly short, 12 or 15 minutes, and after that we will be open for questions.

Mr. HOLIFIELD. All right, will you proceed?

Colonel KOERNER. Mr. Chairman, gentlemen, I am Col. Eldon A. Koerner, Chief, Standards Branch, Procurement Division, Office of the Deputy Chief of Staff for Logistics, Department of the Army.

I am pleased to have this opportunity to testify before your committee on the Army participation in the Defense standardization program.

Standardization of materiel has been a program of the Department of the Army for many years. Objectives of the program have been to increase combat effectiveness and yet conserve materials, facilities, money, manpower, and time. The purpose of these objectives was to reach a high degree of standardization through the development and use of single specifications and standards; elimination of overlapping and duplicating item specifications; reduction to a minimum of the number of kinds, types, and sizes of generally similar items of supply; and the development of maximum interchangeability of component parts of equipment.

The current domestic standardization program received impetus with the passage of the Defense Cataloging and Standardization Act of 1952, which, in effect, formally establishes objectives in which some of the above are included. Department of Defense Directive 4120.3, dated October 15, 1954, is the current implementation of this legislation by the Department of Defense. Army Regulation 715–50, dated August 29, 1955, implements the above directive within the Department of the Army.

Mr. Chairman, I would like to furnish a copy of this regulation for the record.

Mr. HOLIFIELD. It will be received.

(The document, Army Regulation 715–50, referred to appears in the appendix as exhibit G.)

Colonel KOERNER. Early efforts at standardization were concerned primarily with developing specifications and standards needed for use in current procurement; with conversion of existing technical service and departmental specifications to either Federal specifications

or the single series of military specifications; and with standardization projects of relatively limited scope. Particularly during the period since World War II, the technical services of the Army have endeavored to screen the items of supply under their cognizance and to determine the possibilities of simplification and rationalization. By "simplification" we mean analyzing items to determine what can be done to reduce their variety.

For example, handtools would be reviewed to determine whether the jobs to be done can be accomplished with fewer sizes. By "rationalization" we mean the analysis of families of items to see what can be done to replace the number of items with one or a few items. As an example, wire leads were at one time supplied in varying cut lengths with connecters, attached to the ends. It has been determined feasible to supply wire in coils, and connecters separately, and have the items made up in the field for the desired length.

This principle of field fabrication has been extended to such items as tubing, gasket material, roller chain, and radiator hose.

The identification phase of the Federal catalog program in this work has been invaluable in providing a means for readily associating similar items and for revealing substantially identical items carried under different identification data under the old systems. The effects of these screening efforts are demonstrated by the reduction in the overall items of supply in the Army from a net of over 1,500,000 line items about 4½ years ago to slightly under 950,000 items in 1956.

Under the Department of Defense standardization program established by the Defense Cataloging and Standardization Act of 1952, standardization is now being performed by entire commodity areas, or Federal supply classification classes. This method of approach insures consideration of all items within an assigned area or class.

To compare the old and new approaches: Under the old approach the standardization of armored vehicles was considered as a project and efforts were made to standardize all components in this family of vehicles; under the new approach, these components are considered along with all other items classified in the same commodity class. Carburetors, for example, will be considered as a class, regardless of the vehicle in which they have been established.

A total of approximately 500 FSC classes have been assigned for standardization. Of these the Army has been assigned standardization responsibility for 239 classes. Within the Army the Deputy Chief of Staff for Logistics has responsibility for general staff supervision required to unify the program and check on its progress. With this exception, responsibility for standardization has been redelegated to the Army technical services having primary interest in the classes concerned.

Each technical service in the Army thus becomes the office of record not only for the technical accomplishment of documents produced but for taking action to insure that both intradepartment and interdepartmental interest has been considered in establishing a priority schedule for entire FSC classes. These functions are in addition to the processing of standardization documents now being performed by the technical services on a project-by-project basis.

Standarization efforts of the Army at this time are directed toward the completion of individual projects under the old phase of the

standardization program and the review of FSC classes under the current phase of the program to determine standardization potential.

Under the old phase of the standardization program, there were a total of approximately 1,200 standardization projects at the beginning of fiscal year 1957.

At the end of the first quarter of fiscal year 1957 approximately 20 percent of the total scheduled for completion during the year were completed. Under the current phase of the standardization program, there are approximately 40 FSC classes for which the Army is scheduled to prepare detailed plans by the end of fiscal year 1957. Five detailed plans have been approved by the Office of the Assistant Secretary of Defense, Supply, and Logistics. Rate of preparation of the remaining plans during the current year will be accelerated by virtue of the fact that much has been learned in preparing the initial five.

Technical personnel are required to accomplish the standardization program. Such personnel are difficult to obtain in the present labor market. To augment the efforts of present staffs, some of the Army technical services have contracted for completion of certain phases of the work in standardization with civilian contractors.

Department of Defense Directive 4120.3 requires that there be established in each military department a central standardization point of contact. Standards Branch, Procurement Division, Office of the Deputy Chief of Staff for Logistics, is the Army departmental standardization office. The Chief of the Standardization Section of the Standards Branch is the Army Adviser to the Staff Director for Standardization in the Office of the Assistant Secretary of Defense, Supply and Logistics. In accordance with Army Regulation AR 715–50, each of the Army technical services has designated a central unit in the office of the Chief of the service to act as the central point of contact for standardization matters.

As the Department of Defense develops the standardization program for each fiscal year, it is transmitted to the three military departments. The Army Departmental Standardization Office forwards it to each of the Army technical services with necessary instructions required for implementation.

The current Department of Defense proposed schedule requires that all of the 239 FSC classes assigned to the Army be examined by the end of fiscal year 1961 to determine standardization potential.

Army personnel are convinced of the advantages to be gained by standardization of equipment and supplies. Except for isolated instances of resistance to change, which are to be expected in any comparable situation, they have been most cooperative in advancing the program.

Mr. Chairman, I have with me Mr. E. F. DeAtley, who is my deputy in Standards Branch; Lt. Col. Crawford D. Lyons, Chief of the Standardization Section of the Branch; and Mr. C. F. Snead, Chief of the Cataloging Section of the Branch.

Now, in addition to those personnel listed, I have with me Mr. Walker from our Programs and Budget Office, Mr. Gammarino from the Comptroller's Office, and Mr. Donald E. Boussie, regarding questions of personnel and funds assigned to programs in past fiscal years.

We will endeavor to answer any questions you may have concern-

ing the Army participation in the cataloging and standardization programs.

Mr. ECKHART. Colonel Lyons, going back to the first program that was developed by the Department of Defense for fiscal year 1956, did the Army reply as to their capability to successfully perform that scheduled program?

Colonel LYONS. I believe at the time that that program was received, as pointed out by Mr. Dunn, it was received approximately 2 months after we had entered into fiscal year 1956, and while I don't recall the exact response by the Department of the Army to the particular program, I do recall that as a result of the increased emphasis which was being placed on the program at that time, that we did reply stating that we felt that we would require additional resources to complete the program as assigned.

Mr. ECKHART. Is that based on a request to the technical services within the Army as to their ability in terms of funds and personnel to perform their assignments?

Colonel LYONS. Yes; such an answer to the Assistant Secretary of Defense would have been based on an estimate furnished by the Army technical services.

Mr. ECKHART. Can you indicate the kind of a response which you received from the technical services, in terms of what they would need to complete the 1956 program?

Colonel LYONS. I don't have that information. Colonel, do you have it?

Colonel KOERNER. Could I interject here, sir?

Mr. ECKHART. Yes, sir.

Colonel KOERNER. Are you referring specifically to the question you raised concerning the letter of January 25, 1956?

Mr. ECKHART. Actually, I want to cover each of the three programs here, those for 1956, 1957, and the projected program for 1958, in terms of the ability of the technical services to comply with the workload as indicated in their schedules.

Mr. ROBACK. While that information is being sought, may I ask you, Colonel Koerner; do you have any observation to make on the testimony by Mr. Dunn regarding the organization of standards in DOD and Army?

Colonel KOERNER. The statement I would make, sir, would be this: We feel that we have staffed our Departmental Standardization Office sufficiently at the present time with the level of workload that we have.

At such time as it appears to us that we require more people in the Departmental Standardization Office, we will put them in there.

We have been accomplishing the work that has been assigned to us by the Department of Defense with the people that we have assigned, and in our opinion we do not feel that the quantitative number of people assigned to an overhead headquarters establishment is an indication of either the support of or interest in the program.

Mr. ROBACK. Do you have any response to the statement from the Assistant Secretary of Defense with regard to slow and poor progress in the textile procurement field, I mean, in the apparel field, since you have been assigned that class?

Colonel KOERNER. In the parallel——

Mr. ROBACK. Clothing, textiles.

Colonel KOERNER. Oh, in the apparel fields. I would rather have my deputy, Mr. DeAtley, answer that question, since he has a longer term of experience covering the history of that project.

Mr. DEATLEY. Mr. Roback, I think we explained the reasons for the delays to the Office of Assistant Secretary of Defense for failing to meet the clothing textile program.

Mr. ROBACK. You have submitted a statement in response to their memorandum?

Mr. DEATLEY. That's right.

Mr. ROBACK. May we have a copy of that for the record?

Colonel KOERNER. Do we have a copy available? We will have to submit that for the record at a later time, sir. We did not bring a copy of it here.

(The information supplied is as follows:)

JANUARY 31, 1956.

Memorandum for the Deputy Assistant Secretary of Defense (Supply and Logistics)

Subject: Acceleration of standardization program for the textile area (F. S. C. 83, 84, 7210), and subsistence area (F. S. C. 89)

1. Reference is made to memorandum, January 6, 1956, Deputy Assistant Secretary of Defense (Supply and Logistics) to the Assistant Secretary of the Army (Logistics), above subject.

2. In accordance with that memorandum, priority in the Army standardization program has been assigned to subject areas over the areas of furniture and of food preparation and serving, and copy of implementing instructions to The Quartermaster General is attached as inclosure 1.

For the Assistant Secretary of the Army (Logistics):

(Signed) PAUL A. FEYEREISEN,
Colonel, GS,
Assistant Executive, OASA (Logistics).

LOG/E3-5187/56

ACCELERATION OF STANDARDIZATION PROGRAM FOR THE TEXTILE AREA (F. S. C. 83, 84, 7210), AND SUBSISTENCE AREA (F. S. C. 89)

The Quartermaster General DCSLOG

Jan. 26, 1956
Expiration date: February 10, 1956
Mr. Powell/54737/dh

1. The inclosed copy of memorandum, January 6, 1956, to the Assistant Secretary of the Army (Logistics) and its inclosure is forwarded for necessary action.

2. The Quartermaster General will submit to the Deputy Chief of Staff for Logistics by February 10, 1956, any comment on inclosed memorandum and instructions.

By direction of the Deputy Chief of Staff for Logistics:

(Signed) CHARLES S. HAYS,
Colonel, GS,
Chief, Standards Branch, Procurement Division.

ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington 25, D. C., January 6, 1956.

Memorandum for Assistant Secretary of the Army (Logistics)

Subject: Acceleration of standardization program for the textile area (F. S. C. 83, 84, 7210), and subsistence area (F. S. C. 89)

Reference: (a) ASD (Supply and Logistics) memo November 22, 1955.

Subject: Defense standardization program

Reference (a) requested that the current programs for standardization in the textile, subsistence, and furniture areas be expedited under existing plans.

Recent meetings with representatives of DepLog and Quartermaster Corps of the Army, indicate that no substantial progress has been made in speeding up this work.

This office is deeply concerned with the current lack of progress in textile and subsistence standardization in particular, because of their interest to congressional committees and the emphasis placed on these areas in the Hoover Commission reports. It is therefore desired that priority be given to these areas over furniture (F. S. C. group 71) and food preparation and serving equipment (F. S. C. group 73) which were previously given an equivalent order of priority in the defense standardization program for fiscal year 1956.

To expedite accomplishment, it is also desired that until otherwise directed, the Army, as standardization assignee for these two areas, conduct this work in accordance with the attached "Standardization program: Textiles and subsistence," dated January 4, 1956. The Air Force and the Navy, as participating departments, are requested by letter, copy attached, to collaborate fully in meeting the stated objectives.

A copy of your implementing directive transmitting these instructions to the assigned activity is requested.

(Signed) R. C. LANPHIER, Jr.,
Deputy Assistant Secretary of Defense
(Supply and Logistics).

STANDARDIZATION PROGRAM: TEXTILES AND SUBSISTENCE (F. S. C. 7210, 83, 84, AND 89)

JANUARY 4, 1956.

Objectives

(1) Simplification to be completed by the following dates:

Textile area, end items only	June 30, 1957
Textile area, other than end items	June 30, 1958
Subsistence	June 30, 1957

(2) Existing selected item, packaging, and extension projects to be continued and new ones established as warranted.

Procedures

(1) Existing selected item, extension, and packaging projects are to be continued in accordance with the "DOD Detailed Plan for Accomplishing Standardization of Textiles, Apparel, Related Items, and Packaging," date May 8, 1954, and the equivalent plan for the subsistence area, except that the coordinating committees are to be dissolved. Currently established task groups and subcommittees should operate under the management of the assigned activity instead of the coordinating committees.

(2) The textile plan of May 8, 1954, and the equivalent subsistence plan mentioned above shall no longer govern in the case of new projects.

(3) The Military Manual for Standardization M201 shall not be applied to these areas until specifically invoked by OSD.

(4) The standardization assignee will conduct these standardization programs in accordance with the Manual for Military Standardization and Standardization Studies, DSMA M3, and specific modifications or instructions as follows:

(*a*) Standardization study projects are hereby established as listed in tabs A and B, to cover end-item simplification, preparation of drafts of proposed limitation standards, and recommendation of appropriate extension projects for subareas requiring more protracted study. A single limitation standard may be used to cover each F. S. C. class, or additional standards may be used where warranted, covering specifically defined portions thereof.

(*b*) The DepSO's of the participating departments will designate participating activities by telephone and confirm by letter, on telephone request of the assigned activity.

(*c*) The assigned activity will request from the participating activities, lists of appropriate scope covering all items required for future repetitive procurement for their supply systems. The lists are to contain FIIN's item names, Federal catalog descriptions as required by the assigned activity, and the applicable specification requirements (including type, grade, class, etc.). It is

essential that all necessary items be included because these lists will form the basis of standards issued to restrict procurement to only those items listed.

(*d*) The assigned activity will conduct an interdepartmental review of the listings and negotiate to (1) eliminate as many items and variations in items as is feasible in a quick review, (2) agree on extension projects where further standardization is considered desirable, and (3) agree on specification projects required to implement the agreements reached.

(*e*) The assigned activity will draft proposed limitation standard(s) normally for a complete F. S. C. class or specifically defined portion(s), incorporating agreements developed, and normally using standard format and forward as indicated by tab C. It will normally include an index number FIIN, item name, other necessary catalog data, and the using services coded as A, N, Mc, and AF. No attempt will be made at this time to add to or select from the approved catalog data, data solely for the purpose of enhancing the use of the document as a control over design changes. The standard will not include a listing of the items found to be not for procurement. The assigned activity will obtain initiation of the required document projects from the Standardization Division, OASD (Supply and Logistics), coordinate, and submit the standard(s) and any unresolved differences thereon to the Standardization Division for approval in accordance with manual M3. When an item standardized is a new variation not currently in the supply system, the assigned activity will obtain appropriate catalog identification as expeditiously as possible. However, when necessary such items may be identified by other means, pending establishment of approved catalog data.

(*f*) The assigned activity will recommend to the Standardization Division, OASD (Supply and Logistics) initiation of extension and specification projects agreed upon, without further interservice coordination, with copies of such letters of recommendation forwarded to the participating activities.

(*g*) After the above simplification procedure is completed either for an entire F. S. C. class, or for all the end items in a class, the assigned activity will prepare a report that will normally indicate the following:

(1) The total number of line items or line end items in the class according to Federal catalog records.

(2) The number of line items standardized for future procurement in the limitation standard(s).

(3) A list of items initially indicated by the military services as being required for procurement but subsequently eliminated through this project.

(4) An indication of new items adopted to replace eliminated items.

(5) The extension projects established.

(6) Any areas or items on which the assigned activity considers there to be an opportunity for further standardization that is not covered by extension projects.

(*h*) After simplification of all end-item classes is completed, a review will be made by the assigned activity to assure that all unneeded specifications have been canceled. However, responsible specification activities should take cancellation action as early as the need of cancellation becomes apparent, and forward copies of cancellation actions to be assigned activity.

(*i*) In the case of standardization agreements and reports previously developed and approved by the military services, including those implemented by OSD standardization action letters or memorandums and those not yet implemented, the assigned activity will include the standard items covered by these documents in drafts of the appropriate limitation standards.

(*j*) The participating departments will collaborate fully in these programs by furnishing qualified representatives for study groups, by furnishing data, and by processing correspondence and documents within stated time limits, as may be required.

(*k*) The assignee department will submit semiannually a report of overall progress and expectation covering the textile area (F. S. C., 7210, 83, and 84), and another covering the subsistence area (F. S. C. 89). These reports should be similar in content and timing to those currently provided for these areas.

JANUARY 4, 1956.

TAB A.—*Schedule of simplification projects (end items only) (F. S. C. groups 83 and 84)*

Project No.	F. S. C. class	Title	Completion due
601–1	8315	Notions and apparel findings	May 1, 1957.
601–2	8335	Shoe findings and soling materials	June 1957.
601–3	8345	Flags and pennants	December 1956.
601–4	8405	Outerwear, men's	January 1957.
601–5	8410	Outerwear, women's	February 1957.
601–6	8415	Clothing, special purpose	January 1957.
601–7	8420	Underwear and nightwear, men's	March 1957.
601–8	8425	Underwear and nightwear, women's	June 1957.
601–9	8430	Footwear, men's	July 1956.
601–10	8435	Footwear, women's	December 1956.
601–11	8440	Hosiery, handwear, and clothing accessories: Men's	June 1956.
601–12	8445	Hosiery, handwear, and clothing accessories: Women's	September 1956.
601–13	8455	Badges and insignia	March 1956.
601–14	8460	Luggage	August 1956.
601–15	8465	Individual equipment	June 1956.

JANUARY 4, 1956.

TAB B.—*Schedule of simplification projects (end items only) (F. S. C. group 89)*

Project No.	F. S. C. class	Title	Completion due
601–16	8905	Meat, poultry, and fish	June 1956.
601–17	8910	Dairy foods and eggs	September 1956.
601–18	8920	Bakery and cereal products	November 1956.
601–19	8925	Sugar, confectionery, and nuts	December 1956.
601–20	8930	Jam, jellies, and preserves	January 1957.
601–21	8935	Soups and bouillons	Do.
601–22	8940	Special dietary foods and food specialty preparations	March 1957.
601–23	8945	Food oils and fats	Do.
601–24	8950	Condiments and related products	April 1957.
601–25	8955	Coffee, tea, and cocoa	June 1957.
601–26	8960	Beverages, nonalcoholic	Do.
601–27	8965	Beverages, alcoholic	Do.
601–28	8970	Composite food packages	Do.
601–29	8975	Tobacco products	Do.

QMGRD–S 400.114 (Jan. 26, 1956)

Subject: Acceleration of standardization program for the textile area (F. S. C. 83, 84, 7210) and subsistence area (F. S. C. 89)

To: DCSLOG From: OQMG Date: February 9, 1956 Comment No. 2
Mr. Filter/71750/ljc

The Office of The Quartermaster General is taking immediate action to convert to the newly defined program and procedures.

WILLIAM D. JACKSON,
Colonel, QMC,
Chief, Office of Research and Development.

SUBSISTENCE STANDARDIZATION

OQMG

QMGRD–S 400.112

Through: DCSLOG

To: ASD (Supply and Logistics) May, 1, 1956
Mr. Shearon/76981/kw

1. By memorandum for Assistant Secretary of the Army (Logistics) from Assistant Secretary of Defense, dated January 6, 1956, subject: Acceleration of standardization program for the textile area (F. S. C. 83, 84, 7210), and subsistence area (F. S. C. 89), target dates for completion of simplification of F. S. C. classes 8905, meat, poultry, and fish; 8910, dairy foods and eggs; and 8920, bakery and cereal products were established as June 1956, September 1956, and November 1956 respectively.

2. By letters dated February 20 and 29, 1956, the Office of the Quartermaster General requested the four military services to furnish by March 23, 1956, lists

of all items required for future repetitive procurement for their respective supply systems in each of the aforementioned classes.

3. In reply to correspondence between this Office and the Department of the Air Force concerning the supply of the item lists, the Air Force has advised that the information on these classes would be forwarded not later than May 11, 1956.

4. In view of the fact that the necessary simplification data will not be available in time for this Office to meet the present completion target dates in these areas, it is requested that they be extended as follows:

F. S. C. class 8905—From June 1956 to August 1956
F. S. C. class 8910—From September 1956 to December 1956
F. S. C. class 8920—From November 1956 to January 1957

5. Some delay is being encountered in receiving data on the remaining classes of F. S. C. group 89; however, extension of target completion dates on these classes is not being requested at this time in the hope that the dates can still be met.

For the Quartermaster General:

WILLIAM D. JACKSON,
Colonel, QMC,
Chief, Office of Research and Development.

LOG/E3–30756
Subject: Textile standardization
To: Staff Director for Standardization OASD (S&L) The Pentagon
Date: May 28, 1956 Comment No. 2
Mr. Powell/54737/dh
From: DSCLOG

1. Forwarded.

2. The Department of the Army requests that notices of extensions granted for the corresponding projects be forwarded directly to the Quartermaster Corps with copies to the responsible activity in the Department of the Navy and of the Air Force and to the DepSOs.

For the Deputy Chief of Staff for Logistics:

(Signed) E. F. DEATLEY,
Acting Chief,
Standards Branch, Procurement Division.

TEXTILE STANDARDIZATION

OQMG

QMGRD–S 420
Through: DCSLOG
May 21, 1956
To: ASD (Supply and Logistics)
Mr. Canady/fgt/74336

1. References:

(*a*) Memorandum from Assistant Secretary of Defense (Supply and Logistics) to Assistant Secretary of the Army (Logistics), subject: Acceleration of standardization program for the textile area (F. S. C. 83, 84, 7210) and subsistence area (F. S. C. 89.) January 6, 1956.

(*b*) Standardization program: Textiles and subsistence (F. S. C. 7210, 83, 84 and 89), January 4, 1956, attachment to reference (*a*).

2. In accordance with paragraph 4 (*c*) of reference (*b*), this Office requested the four military services to furnish listings of all items required for future repetitive procurement and established due dates for collection of data geared to meet the completion dates established by tab A attachment to reference (*b*).

3. Submittal of data by the various services in several of the classes has been running from 3 to 6 weeks beyond the due dates established, thereby delaying the preliminary work required to meet completion dates.

4. In view of the above, it is requested that the present completion target dates for the F. S. C. classes as indicated below be extended as follows:

F. S. C. 8430—From July 1956 to August 1956
F. S. C. 8435—From December 1956 to January 1957
F. S. C. 8440—From June 1956 to August 1956
F. S. C. 8445—From September 1956 to October 1956
F. S. C. 8460—From August 1956 to September 1956
F. S. C. 8465—From June 1956 to August 1956

5. Some delay is being encountered in receiving data on the remaining classes of F. S. C. groups 83 and 84; however, extension of target completion dates on these classes is not being requested at this time in hope that dates can still be met.

For the Quartermaster General:

WILLIAM LITTLE,
Colonel, QMC Deputy to Chief,
Office of Research and Development.
WILLIAM D. JACKSON,
Colonel, QMC,
Chief, Office of Research and Development.

STANDARDIZATION PROGRAM:

TEXTILES AND SUBSISTENCE

OQMG

QMGRD–S 420
Through: DCS (Logistics) September 4, 1956
To: ASD (Supply and Logistics) Mr. A. C. Sneiderwine/fgt/74336

1. Reference is made to the standardization program: Textiles and subsistence (F. S. C. 7210, 83, 84 and 89), January 4, 1956, which established completion target dates for the various F. S. C. classes in the textile and subsistence areas.

2. In accordance with telephone request by Mr. Sneiderwine, OQMG, with Miss Lawrence, OASD (Supply and Logistics), August 28, it is understood that "Completion due" dates established by above reference are extended as indicated below:

F. S. C. 8465—extended to October 1956
F. S. C. 8460—extended to October 1956
F. S. C. 8905—extended to October 1956

3. Confirmation is requested.

For the Quartermaster General:

WILLIAM D. JACKSON,
Colonel, QMC,
Chief, Office of Research and Development.

Mr. ROBACK. Do you have the information that you have been looking for?

Colonel LYONS. Yes, sir; I do have. As a result of the letter which we sent to the Army Technical Services on the 1st of February 1956, we were able to determine that they would require certain additional resources to complete the then assigned 1956 standardization program from the Department of Defense.

It was estimated by the Technical Services that a total of 63 additional departmental spaces would be required for use within the management offices of the Technical Services.

It was estimated that a total of 281 additional field spaces would be required to accelerate the program. The information which we obtained from the Technical Services at that time was then submitted through channels to our budget and our personnel people.

Mr. ECKHART. What action was taken in both of those departments?

Colonel LYONS. I think that it might be better at this time if Mr. Boussie, who is from our manpower division, and Mr. Walker, or Mr. Gammarino, who are in budget channels, would answer this particular question.

Mr. HOLIFIELD. Identify yourself to the reporter, each one of you, as you speak.

Mr. GAMMARINO. My name is Gammarino, sir. I am with the Office of the Army Comptroller.

Mr. HOLIFIELD. Your full name?

Mr. GAMMARINO. Armand Gammarino.

When the Army Comptroller received the request from the Office of the Deputy Chief of Staff for Logistics in mid-fiscal-year 1956, we included the request for additional moneys in our reapportionment request which we at that time were making to the Office of the Secretary of Defense Comptroller for the fiscal year.

That is a normal process, in that during the year we find that we either need more money here or less money there, and we go up in mid-year and ask for adjustments.

As a consequence of our defense there, we were given additional authority over the amount we had budgeted for fiscal year 1956 before Mr. Wilson's letter, $6.3 million for standardization.

As a consequence of the Army effort to meet Mr. Wilson's directive, we were able to obligate by June 30, 1956, or at the end of the year, $7.3 million, or approximately $1 million more than we had asked the Congress for. In essence, this was a reprograming within resources available to the Army.

Mr. HOLIFIELD. And as to personnel, did you wish to testify to that?

Mr. GAMMARINO. No, sir. Mr. Boussie is qualified on that, sir.

Mr. HOLIFIELD. Any questions on the budgeting?

Mr. ECKHART. No, sir.

Mr. HOLIFIELD. Mr. Boussie, will you now testify as to the manpower assigned to the job?

Mr. BOUSSIE. I am Donald E. Boussie, representative from the Director of Personnel Office, Deputy Chief of Staff for Logistics.

In regard to the request for 63 additional departmental headquarters personnel, we have documented evidence to show that this increase was provided to each of the chiefs of service in fiscal year 1956.

We also took into consideration the requirement of some two-hundred-and-eighty-odd personnel when we provided personnel authorization to the Technical Services for their field operations.

Mr. ECKHART. Now, can we go over this same line of questioning and get the same facts with respect to your 1957 program?

Colonel KOERNER. The personnel and the funds for 1957 and 1958?

Mr. ECKHART. Yes, sir; what the Technical Services indicated they needed, what you people recommended, and what the Bureau of Personnel and the Finance people got approved.

Colonel KOERNER. I believe that Mr. Walker has that information, do you not?

Mr. WALKER. I am Ernest L. Walker, Jr., Office of Deputy Chief of Staff for Logistics. I am a budget analyst in the program.

For 1957 in the initial budgets, the Technical Services asked for $11.3 million, and the Department of the Army submitted a budget to Congress of $7.7 million, because we did not at that time have a 1957 DOD program. Therefore, we projected the budget on the basis of our 1956 program.

Then prior to the beginning of the fiscal year, at the apportionment action, the Technical Services asked for $12.4 million. The Army programed $12.4 million and at the present time there is $12.1 million in the standardization program.

Mr. ROBACK. Is this a complete program?

Mr. WALKER. I am talking total Army standardization program, which includes that DOD program.

I might mention there that again the Army submitted a budget to Congress of $7.7 million and after the facts were known, the Army made available $12.1 million from our available resources, after the congressional actions.

Now, for 1958, the Technical Services have asked for $16.4 million. We have in the budget to go to Congress $15.2 million, which is a staff estimate of our capability and requirements for 1958. This, of course, as it happened in 1956 and 1957, will be subject to adjustment as we come up to our apportionment action.

If we get further into the year and get ready to go into fiscal year 1958, we can see all of the facts. We will then know our maximum capability, and the Army again will look at this $15.2 million against its capability in 1958.

Mr. ROBACK. How are those requests reflected in your budget presentation? Does the Appropriation Committee have an identifiable item for standardization?

Mr. WALKER. That's right, sir. In the operations and maintenance appropriation budget, standardization as such is discussed as a separate item.

Mr. ROBACK. That is a green sheet item in the budget presentation?

Mr. WALKER. It is a budget submission. It is an individual primary expense account in the Army budget, and it is discussed by the subcommittee as an individual item. It is not totally identified in the appropriation green sheets as such, but in the appropriation and in the discussion with the committee, it is identified as a separate program.

Mr. ROBACK. Is it customary for the Army witnesses to give a brief recital or a presentation on their standardization program before the Appropriations Committee.

Mr. WALKER. Yes, sir.

You will see in the presentations that the Army makes a statement for the record as to the overall program and its accomplishment.

I might mention in 1957, if you will read the appropriation discussion or hearings, the Army indicated that their budget of 7.7 was not sufficient to do their program, since they had received the DOD schedules, and it was estimated that we would need 11.5, which was later determined to be the $12.1 million figure which we made available.

Mr. ECKHART. Can anyone here give us any enlightenment as to the action in terms of recruiting personnel? I assume that most of this budget here will be used for payment of salaries for people working in this program.

Mr. WALKER. In the standardization, of course we deal with contracts as well as Government employees, Mr. Boussie, from Manpower, I think is in a good position to show you that throughout the years, through our effort in the Army, plus our trying to combat this lag in

recruitment due to skills that we can't recruit, I think he can cover that phase, if you would permit Mr. Boussie to cover personnel.

Colonel KOERNER. One point I would like to make, if I may, Mr. Eckhart, is that we do not feel that the standardization effort requires totally professional engineering talent.

We feel, and we know from experience, that the standardization effort is a mixture from professional engineers, from technicians, from technical writers, and from clerical and from stenographic personnel, all of whom are paid from the standarization budget funds. We have no real count of the professional engineering talent involved in that, but we have a considered guess of somewhere between 15 and 25 percent of that type of personnel involved.

Mr. ECKHART. You are distinguishing here between the simplification work and the technical analysis?

Colonel KOERNER. I have made no attempt to differentiate between the types of work. I am just trying to identify the relative proportion of professional engineers engaged in the program on any of the types of activities that have to be involved in the program.

Mr. ECKHART. So as you people stand right now in terms of your 1957 program and what has been requested for the 1958 program, you will have sufficient resources and you anticipate being able to recruit the necessary personnel, to stay on schedule?

Colonel KOERNER. We have indications from the technical services that they are encountering difficulty in getting all of even that smaller percent of professional engineering type of talent that is required, as well as some difficulties in securing capable technicians to be used on the program.

Mr. ECKHART. Will that fact be reflected to any extent in the amount of contracting that you will do with private industry?

Colonel KOERNER. The indication from our technical services is that it will have an effect on the amount of contracting, in that some of them have indicated that they intend to resort, if it is possible to do so, to more contracting for standardization services than they have done before.

Mr. ROBACK. Does that come out of the standardization budget?

Colonel KOERNER. Yes, sir.

Mr. ROBACK. How many contracts are extant?

Colonel KOERNER. Do you have that information, Colonel Lyons?

Colonel LYONS. I didn't understand the question.

Colonel KOERNER. The number of contracts for standardization services that there are at present.

Colonel LYONS. We don't have it.

Mr. ROBACK. Will you supply for the record a list of the contracts, with whom, and the subject matter covered?

Mr. HOLIFIELD. You do have contracts at this time, do you?

Colonel LYONS. Yes, sir.

Colonel KOERNER. Yes, sir.

90772—57——9

(The list of contracts referred to follows:)

DEPARTMENT OF THE ARMY

OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS

Washington 25, D. C.

STANDARDIZATION CONTRACTS AS OF FEBRUARY 1, 1957

Contract No. and contractor	*Dollar amount and scope*
Chemical Corps:	
DA18–108–Cm–5981: Foster D. Snell, Inc., 29 West 15th Street, New York 11, N. Y.	$20,023.40. Bring up to date and prepare for coordination through regular channels 101 specifications for chemicals.
DA18–108–Cm–5958: Container Laboratories, Inc., 1519 Connecticut Avenue NW., Washington 6, D. C.	$87,535. Develop minimum feasible varieties of packaging for specifications covering chemical item support parts at Memphis General Depot.
DA–18–108–Cm–6013: Lehigh Engineering Association, 295 Plane Street, Newark 2, N. J.	$122,625. Make engineering review of approximately 4,000 Chemical Corps drawings and bring into consistency with applicable specifications and standards.
DA18–108–Cm–6282: Roger and Roger, Inc., 130 East 59th Street, New York 22, N. Y.	$70,000. Analyze approximately 3,000 items of chemicals and equipment to determine standardization potential.
Corps of Engineers:	
DA44–009–ENG–3185: Timber Engineering Co., 1319 18th Street, NW., Washington 6, D. C.	$3,000. Review individual specifications, as directed, to insure efficient and economical use of wood.
DA44–009–ENG–3133: Huston Associates, Box 599, Route No. 4, Alexandria, Va.	$22,000. Prepare approximately 750 sheets of drawings for military equipment.
DA44–009–ENG–3188: Walter Conway & Associates, 1019 22d Street, NW., Washington 7, D. C.	$15,000. Finish type specifications from drafts provided by Corps of Engineers.
DA44–009–ENG–2963: Cooke Engineering Co., 508 North Pitt Street, Alexandria, Va.	$79,062.48. Prepare requirements portions of specifications, as required, to a total of approximately 18,000 man-hours.
DA44–009–ENG–2656: Technical Services Corp., 1015 Chestnut Street, Philadelphia 7, Pa.	$88,550.80. Perform standardization engineering work at Fort Belvoir to the extent of approximately 29,200 man-haurs.
DA11–184–ENG–14913: Robert W. Hunt Co., engineers, 175 West Jackson Boulevard, Chicago 4, Ill.	$110,000. Monitoring and witnessing qualification tests on internal-combustion engines.
Ordnance Corps:	
DA20–089–ORD–38260: Detroit Design & Engineering Co., Inc., Detroit, Mich.	$215,425. Perform engineering standardization including preparation of 609 standardization documents.
DA36–034–ORD–1998: National Paint, Varnish & Lacquer Association, Inc., Washington, D. C.	$7,500. Perform technical writing, editing, typing, etc., relative to unification and definition of finishes and finishing systems to the extent of approximately 1,715 man-hours.
DA30–069–ORD–1839: Technocopy, Inc., New York, N. Y.	$7,500. Perform technical services required in preparation of specifications and standards.
DA33–079–ORD–2043: Associated Engineers, Inc., Springfield, Mass.	$90,000. Perform technical duties required in development and coordination of standardization documents under responsibility of Rossford Ordnance Depot.

Quartermaster Corps:

The following contracts are in the heraldric field for development of standard samples, hubs and dies, cartoon punching, insignia, etc.:

Contract No. and contractor	*Dollar amount*
Textiles:	
OI–150—Blumberg Bros	$24.90.
OI–190—Conrad Co	$145.
OI–191—Conrad Co	$360.
OI–226—Conrad Co	$290.
OI–248—Conrad Co	$405.
OI–392—Hirsch & Sons	$105.
OI–475—Conrad Co	$116.
OI–776—Conrad Co	$180.
OI–826—Schwal Textile Co	$150.
OI–893—Bally Ribbon Mills	$75.
OI–1005—S. Mars Co	$144.
OI–1079—Hartman, Inc	$265.
OI–1127—Bally Ribbon Mills	$240.
OI–3505—Conrad Co	$612.
Metallic:	
DA–19–129–QM–641–56: Medallic Art Co	$898.
DA–19–129–QM–738–57: Shields, Inc	$712.
DA–19–129–QM–5141–57: Belfour Co	$141.
DA–19–129–QM–7354–57: Frank Co	$480.
DA–19–129–QM–7157–57: Frank Co	$240.
DA–19–129–QM–779–57: Belfour Co	$1,930.
DA–19–129–QM–7519–57: Not awarded	$700.
DA–19–129–QM–5308–57: Emblematic Trades, Inc	$200.

The following contracts are for developing standards for specific components of refrigeration and air-conditioning equipment:

Contract No. and contractor	*Dollar amount*
DA19–129–QM–856: Consultants, Inc	$50,612.05.
DA19–129–QM–470: U. S. Testing Co	$34,518.

Signal Corps: No standardization contract current, 2 in preparation.

Contract No. and contractor	*Dollar amount and scope*
Transportation Corps: DA36–022–TC–6780: John R. Thompson, 921 17th Street NW., Washington, D. C.	$———. No funds currently obligated. This is a "task order" type, with no tasks currently assigned.

We brought with us a typical contract, which we are prepared to give details of. Now, the information request, sir, we will have to gather from the technical services, and it may take some time.

Mr. Roback. One of the questions that the committee, I am sure, is interested in is, you don't have the personnel, you have to hire out by contract to do some work. How much of that time, for which the Government pays, is spent in getting oriented—pointing out what the problem is; learning about the military supply system; what the needs are; and then after all that preparatory work is paid for, which doesn't add anything to the military system, they then proceed to consider the standardization problem.

Mr. Holifield. In other words, are there available in being qualified people to do this job, without a long period of exploration and indoctrination by the Army itself?

Mr. ROBACK. Which takes time and personnel.

Colonel KOERNER. I think that since that involves a great deal of past history on usage of such contractors, I had better refer that to Mr. DeAtley.

Mr. ROBACK. May I ask, before you answer that, that at the next meeting of the committee the Army witnesses be prepared to testify in detail on the substance, the content, the method of performance on its contracts, on at least one representative contract.

Colonel KOERNER. As I say, we have a representative contract that we can give you details from, but we will be prepared at the next hearing on all the details that you have asked us to provide.

Mr. HOLIFIELD. Will you leave a copy of that representative contract for the staff to study, in the meantime?

Colonel KOERNER. Yes, sir; we can do that.

Mr. HOLIFIELD. If you have one with you.

Colonel KOERNER. Yes, sir.

Mr. ROBACK. Can we have some testimony now, for the moment, on the previous question?

Mr. HOLIFIELD. Mr. DeAtley, would you care to respond to that?

Mr. DEATLEY. There are contractors who have the capability of doing this type of work. Some of the work, mainly the analysis of the items and indicating their relationship, is not too dissimilar from an analysis which is done preparatory to cataloging, and there are people that are in the business of doing that sort of work. But whether they would now be available for additional contract work I do not know.

Mr. HOLIFIELD. Do you look upon the assignment as being urgent enough to go into a system of contracting to get this work done?

Mr. DEATLEY. Sir, I believe it would be desirable, because, granted, as Mr. Roback indicated, we would be training people and then lose their know-how later, at the same time if we recruited people and put them on classified civil service for a limited period of 2 to 3 years, and then had to go through a "riffing" procedure, it would not be very attractive to professional people. I mean, most professional people like to be assured some continuity of service.

Mr. HOLIFIELD. So it is indicated that contracting may be your best method.

Mr. DEATLEY. It is certainly worth considering; yes, sir.

Mr. ECKHART. With respect to the Department of Defense schedules, does the Army care to make any comments on the F. S. C. classes that have been assigned to them which have been given the highest priority?

Colonel KOERNER. There again, I think I had better call on Mr. DeAtley, because of again his continued history in the past.

Mr. DEATLEY. Sir, the classes that were selected were selected with the assistance of the technical services.

They were areas that we felt could be done during the fiscal year, and I don't think that they were selected with the idea that they would give you the best paydirt, if that is what you had in mind.

I would like to show you that standardization work is not something that just started. Each technical service puts out material of this sort, showing what has been done.

Here, for example, is a showing of field combat clothing. On this side, in 1943, we had 11 different uniforms, with 1,464 component items. Over here, in 1955, we have 1 field combat uniform for all ground

troops, with 228 component items. The next page goes into dress shoes, which was the subject of inquiry this morning.

Mr. ECKHART. This is all work that has been done under the existing phase?

Mr. DEATLEY. Yes.

Mr. HOLIFIELD. We realize that this is not a new project.

Mr. DEATLEY. Here we have the armor family, where we have done considerable standardization in the bits and pieces of 13 armored vehicles.

Mr. HOLIFIELD. If you will submit those, we will be glad to have them for our files, if you have an extra copy.

(The documents referred to are contained in the subcommittee files.)

Mr. DEATLEY. These are extras.

Mr. HOLIFIELD. This committee, of course, has been interested since way back in 1949 in cataloging, as you probably know, when Public Law 152 was passed out of this subcommittee.

Mr. DEATLEY. We did not at this time feel that we could go into the program so ambitiously.

In the armament area, for example, we standardized our carburetors and our engine for the family of armored vehicles. If we had tried to include at the same time consideration of all vehicles, it would have delayed this work.

Mr. ROBACK. In other words, the classification approach to standardization here, which has been adopted by the Department of Defense, does not in and of itself give you any priority items?

Mr. DEATLEY. I wouldn't say that, sir, because, you see, we are still permitted to work and develop projects as they are needed with our current procurement. We are not limited to working in the classes that are assigned, Mr. Roback.

Mr. ROBACK. I appreciate that, but the fact that a class has been assigned in itself does not register any reflection of your priority need; is that right?

Mr. DEATLEY. That is correct.

Mr. ROBACK. So it would be understandable on your part to deemphasize the DOD program, because that does not reflect your need particularly, granting the overall validity of a standardization program.

Mr. DEATLEY. I would not say that, sir, because we are working, for example, in the areas that are proposed for single managership, and I think that is a step in the right direction. We should accomplish standardization there before we try to cross service, each other, and that is part of the program.

Mr. ROBACK. You mean, where Army has single-manager cognizance, you have to standardize?

Mr. DEATLEY. Where other departments have single-manager also, in photographic equipment, for example.

Mr. ROBACK. How many interdepartmental committees do the Army standards people sit on, taking all of your technical services together?

Mr. DEATLEY. Do you mean just within the Department, sir?

Mr. ROBACK. Within the Department of Defense.

Colonel KOERNER. Concerned with standardization, sir?

Mr. ROBACK. Right.

Mr. DEATLEY. We don't have a complete list.

Mr. ROBACK. Will you hazard a guess, and verify it for the record?

Mr. DEATLEY. Within the Department, I couldn't hazard a guess.

Mr. ROBACK. How many industry committees are working with Army standardization projects?

Mr. DEATLEY. I don't know the count now, sir, but some time back there were some seven hundred and sixty-odd committees, in which the military departments furnished technical representation.

Mr. ROBACK. That is all committees?

Mr. DEATLEY. Yes, sir.

Mr. ROBACK. Not necessarily in standardization work?

Mr. DEATLEY. That was SAE committees, ASTM, et cetera.

Mr. ROBACK. In standardization work?

Mr. DEATLEY. That's right, sir.

We have in the Army an index or a directory of Army personnel that are on such committees, which I can furnish for the record.

Mr. ROBACK. We would like to have that, with the chairman's permission.

(The documents requested are retained in the Subcommittee files.)

Mr. FASCELL. Mr. Walker, I wonder if you could answer a question for me, while we are waiting here a moment.

Mr. WALKER. Yes, sir.

Mr. FASCELL. You said that the fiscal 1957 budget was an extension of the 1956 budget?

Mr. WALKER. The dollars reflected in the 1957 budget was a reflection of our estimated total obligations for 1956.

Mr. FASCELL. Extended?

Mr. WALKER. Yes, sir.

Mr. FASCELL. In this extension, is this a manual operation or is this a computation by electronic equipment?

Mr. WALKER. No, sir. The working level in the Standards Branch that work in standardization develop the dollar requirements based on the estimated workload from the Technical Services.

Mr. FASCELL. Is the extension item by item, or by total?

Mr. WALKER. Project by project, sir. I mean, they work with the projects in these areas to the point where they can pretty well price out the dollar requirement.

Mr. FASCELL. Is this a normal procedure in extending such matters?

Mr. WALKER. Well, do you mean as to the budget figures, sir?

Mr. FASCELL. Yes. In other words, you arrived at the 1957 figure by an extension of your 1956, and, as I understand it, that was done item by item, project by project?

Mr. WALKER. Of course, sir, the figures that were developed were from projects submitted from the technical services, but as I said, we had not received our DOD schedules for 1957.

Therefore, it was a policy of the Department of the Army that for the budget exercise, we should project the same effort as was devoted for 1956, until we saw where we would have to go in 1957.

Mr. FASCELL. But this reflection was a different dollar amount, was it not?

Mr. WALKER. From what the tech services projected, yes, sir. They came in for a request of 11.3. Of course, at that time, sir, we could have——

Mr. FASCELL. All I am trying to find out is whether or not in the extension it was an arithmetical process or algebraic process, or whether it was done on comptometers or manual operation?

Mr. WALKER. A manual operation, done by the engineers in the Standards Branch, but the 7.7 did not represent that. That represented a decision to hold until we saw what the program was going to be.

Mr. FASCELL. Thank you.

Mr. HOLIFIELD. At this time I understand—and I did not know this until just now—that the Air Force is down from Wright Field for this presentation, and we disappointed them once before, and I wonder, in view of the fact that the Army is here in Washington, if they would make may at this time, and we will let the Air Force make their presentation until 2 o'clock, and then the members have committees, and this will enable the Air Force to be excused, if you can make presentation within an hour.

Colonel KOERNER. Then you want us to be present for further questioning?

Mr. HOLIFIELD. Not today. We may have to call you back, Colonel, after we get this material, and there will be some written questions, incidentally, given to each one of the services by the staff, and it may be that we can have most of the information furnished by letter.

If not, we might call you in again some time next week or the following week to finish, and we also will have to have another appearance for the Navy. We won't be able to get to them today, so we will probably make it a joint meeting between the Army and the Navy at a later date.

We appreciate your being here. We are sorry we have to make this temporary arrangement.

Colonel KOERNER. We will await your pleasure, Mr. Chairman.

Mr. HOLIFIELD. Thank you very much, sir, for your presentation.

All right, gentlemen, we are going to try to give you an opportunity to make your statements, so you won't have to make this long trip back down to Washington.

STATEMENT OF COL. MARION G. FERGUSON, JR., CHIEF, CATALOGING AND STANDARDIZATION DIVISION, DIRECTORATE OF SUPPLY, HEADQUARTERS, AIR MATERIEL COMMAND; ACCOMPANIED BY COL. W. R. CLINGERMAN, ASSISTANT FOR STANDARDIZATION, OFFICE OF DEPUTY CHIEF OF STAFF, DEVELOPMENT HEADQUARTERS, UNITED STATES AIR FORCE; LT. COL. HARVEY KENNEDY, PROCUREMENT POLICY DIVISION, DEPUTY CHIEF OF STAFF, MATERIEL HEADQUARTERS, UNITED STATES AIR FORCE; LEE COLEMAN, CHIEF OF STANDARDIZATION DIVISION, DEVELOPMENT ENGINEERING AT HEADQUARTERS, AIR RESEARCH AND DEVELOPMENT; CLARENCE DAHM, DEPUTY CHIEF, CATALOGING AND STANDARDIZATION DIVISION; AND MARTIN CONNOLLY, CHIEF OF STANDARDIZATION BRANCH, HEADQUARTERS, AIR MATERIEL COMMAND

Colonel FERGUSON. Thank you very much, Mr. Chairman. I am Col. Marion G. Ferguson, Jr., Chief of the Cataloging and Standard-

ization Division, Directorate of Supply, headquarters of the Air Materiel Command, at Dayton, Ohio.

We have a prepared statement, Mr. Chairman, which I would like to read to you at this time.

Mr. HOLIFIELD. All right, sir.

Colonel FERGUSON. We are happy to be here today to present further details on the Department of Defense standardization program as it is being put into effect in the Air Force. I believe the presentations you have heard to date have given you a great deal of the information you desire and, in the interests of avoiding repetition, I would like to confine my remarks to those matters primarily involving the Air Force. We will, of course, be ready to answer any questions or supply any further information you want at the conclusion of my statement.

First, let me assure you that the Air Force is enthusiastically supporting the Department of Defense standardization program. We have long been aware of the need for aggressive action in this area. As our equipment becomes more and more expensive and complex the necessity for avoiding duplication and for simplifying our supply system becomes increasingly urgent. The Air Force has devoted considerable effort to standardization for many years, which I will discuss later on.

I would like to say at the outset that we believe an overall governmentwide program was long overdue and that the impetus for such a program was wisely provided by Public Law 436.

As has been pointed out in earlier presentations, the Department of Defense has implemented Public Law 436 in Department of Defense Directive 4120.3. No major change in the existing Air Force organizational structure was caused by our implementation of this directive. In our present logistic structure, functional responsibilities for supply, maintenance, and procurement are delegated to the Air Materiel Command and further distributed by Federal supply classes to subordinate field activities. In like vein, the Air Research and Development Command has assigned functional responsibility for research and development to its subordinate centers and distributed the workload accordingly. Similarly, the standardization assignment for each of the 89 Federal supply classes for which the Air Force has been designated as assignee department has been delegated to either an air materiel area, a depot, or to an air development center. Regardless of the assignment, both commands collaborate on all phases of the program.

As you have previously been told, each military department has been required to establish a departmental standardization office. These offices monitor the participation of the military departments in the Department of Defense standardization program and act as a point of contact between the Assistant Secretary of Defense and the departments for standardization matters.

Responsibility for the operation of the Air Force Departmental Standardization Office, which in turn is responsible for the day-to-day management of the Air Force program, has been delegated to the Air Materiel Command. This command is provided broad guidance by the Deputy Chief of Staff/Development Headquarters USAF.

Within its organization the Air Materiel Command has placed the Air Force Departmental Standardization Office in the Standardiza-

tion Branch, Directorate of Supply, which is the same office in the Air Materiel Command that is responsible for the standardization functions of that command. Also the Air Research and Development Command has established their Command Standardization Office at Wright Air Development Center, Wright-Patterson Air Force Base.

Thus the Air Force Departmental Standardization Office as well as the two command offices responsible for the detailed work of the Air Force program are located at the same Air Force base.

I would now like to mention a few specific Air Force actions that have been taken since the issuance of the Department of Defense program. These actions, we believe, have contributed significantly to the overall program.

For example, headquarters USAF directed both the Air Materiel Command and the Air Research and Development Command to reprogram their resources for 1957 to assure the accomplishment of the fiscal year 1957 program. This was necessary since resources were not provided for fiscal year 1957 during the normal budget cycle. As a result of this reprograming we are submitting our portion of the overall program on schedule.

The specific accomplishments by Federal supply class and by quarter for fiscal year 1957 have already been submitted to you. While we have met the scheduled workload to date, we have done so at the expense of other Air Force programs. Ceiling limitations and recruitment and training difficulties added to our difficulties in this area.

We also recommended that a committee be formed of representatives from the Department of Defense and the three departments to be responsible for scheduling programs for fiscal year 1957 and subsequent years. This scheduling effort reflected a realistic buildup in succeeding fiscal years, taking into account the actual accomplishments during fiscal year 1956. Our recommendations were accepted by the Department of Defense and the Army and Navy with the result that we now are operating under fixed programs for fiscal year 1957 and fiscal year 1958 as recommended by the Program and Scheduling Committee and directed by the Department of Defense.

As a result of this action we will have a fully coordinated program for all years through fiscal year 1959, and for the first time will be in phase with the budget cycle.

The Air Force likewise has been active in assisting in the resolution of problem areas, in developing procedures, and in exploring improved methods of management control and reporting.

One notable area is the work of the Air Materiel Command in the development of an electrical accounting machine, EAM, method of compiling and reporting project and management data. We believe that these efforts have been of considerable value to the overall Department of Defense standardization program.

I mentioned earlier that the Air Force had devoted considerable effort to standardization prior to passage of Public Law 436. These earlier efforts, while not a part of an overall coordinated program, were by no means wasted. We have recognized for many years that a system which integrates in excess of 500 new items daily must contain effective controls to prevent entry of unnecessary items and methods to eliminate items as their usefulness is outlived. We

also recognized that the system had to provide for a dynamic interchangeability review program to achieve maximum utilization of the items in the supply system.

The intent and objectives of these elimination and interchangeability programs, and the current Department of Defense program are compatible, even though these Air Force related efforts preceded the Department of Defense standardization program, as pointed out above.

The interchangeability data developed by the Air Force through these programs are of definite value as is evidenced by the fact that approximately 23,000 line items were eliminated from the Air Force supply system during calendar year 1956 as far as further procurement is concerned. Complete elimination of these items will be accomplished by attrition.

We believe that the current standardization program carries on the theory of our earlier programs and functions both as a corrective and preventive measure. The program's basic products are specifications and standards. These constitute the controls or filters which allow only those new items satisfying a valid need to enter the military logistic system. But the items now carried in military inventories must first undergo painstaking examination to determine what can be eliminated and what should be retained and procured in the future. This elimination process provides the corrective aspect of the program. The item standards and related findings developed during this phase eventually are reflected in applicable specifications and standards.

Recognizing the vast potential of technological know-how, vested in industry, Department of Defense Directive 4120.3 prescribes the adoption of industry specifications and standards for military use where suitable.

The Air Force will provide for maximum industry participation in the development of specifications and standards, through collaboration and discussions with the Aircraft Industries Association of America, AIA; National Security Industries Association, NSIA; Society of Automotive Engineers, SAE; American Standards Association, ASA; and other industry associations.

In general, we believe that the standardization program is progressing at a satisfactory rate. In considering the future course of the program, however, we think it is important to keep in mind several points.

There are many forms and degrees of practicable standardization. Under certain conditions, end items of equipment, major components, component assemblies, subassemblies, spare parts, and even bulk materials from which the spare parts are fabricated may be beneficially subjected to standardization action. Again, conditions may be such that standardization may be beneficially applied only to certain limited areas such as mounting flanges, aperture design, annealing, protective finishes, packing, and packaging methods. Every Federal supply class and segment thereof requires a flexible and individualistic approach to determine which of the various forms of standardization are applicable, and to what degree they may be pursued to achieve the greatest benefits.

A particularly important factor in such determinations is the rate of technological advancement in the area under study. Where the state of the art is highly fluid, as it is for rocket engines, extreme

discretion must be used in the application of standardization principles to avoid inadvertent restriction of development progress.

Considering that hundreds of thousands of items will be undergoing standardization review and that a very high degree of coordination is required among the three departments, Department of Defense, and industry, it is apparent that management problems will be numerous and that we must proceed at a reasonable rate while gaining experience at all levels.

In this regard we recognize that it is especially important to enlist industry's active participation in the program.

In concluding, I would like to stress the necessity for the free interchange of knowledge, technical ability, and engineering know-how, presently available in both Government and industrial organizations if this program is to succeed.

The Air Force recognizes its responsibilities in this interchange and will continue to expend all the effort practicable to support the Department of Defense standardization program.

Mr. Chairman, I have with me Colonel Clingerman, who is assistant for standardization, at the Deputy Chief of Staff level, Development Headquarters, USAF; Lieutenant Colonel Kennedy, Procurement Policy Division, Deputy Chief of Staff, Materiel Headquarters, USAF; Mr. Lee Coleman, Chief of the Standardization Division, Development Engineering at Headquarters Air Research and Development Command; Mr. Dahm, my civilian deputy in Cataloging and Standardization Division; and Mr. Connolly, my Chief of the Standardization Branch at Headquarters Air Materiel Command.

We will attempt to answer any questions, sir, that you might have at this time.

Mr. HOLIFIELD. Thank you very much, Colonel.

Will you at this time designate the proper person to give us a summary of the amount of money which has been allocated to this effort in your Department, if you do have it, for the 3 years of 1956, 1957, and 1958, and the amount of personnel which you have assigned to standardization work, if that is a question that can be answered.

Colonel FERGUSON. Yes, sir. I believe we are prepared to answer a part of that, and I would like to ask Colonel Clingerman, Headquarters, USAF, to attempt to answer the question.

Colonel CLINGERMAN. Sir, first I would like to say that in the Air Force we have never yet budgeted for standardization as a separate item which the Army has indicated to you that they do.

Our standardization people that we use for this program are included in our depot support operations in the Air Materiel Command, in 400 series money, and our engineers in the Air Research Development Command are in our research and development appropriations.

Furthermore, our accounting procedures and manpower controls are not set up to reflect the number of people that are involved in this business, so anything that we can do is in effect a guess, and is a guess on the number of man-years, perhaps.

Mr. HOLIFIELD. Have you furnished, in the total of man-hour effort which has been given to the committee, the component parts of that estimate?

Colonel CLINGERMAN. The part that came from Mr. Dunn, sir, we have. Ours is part of that.

Mr. HOLIFIELD. And what is the approximate part of that?

Colonel CLINGERMAN. For fiscal 1956——

Colonel FERGUSON. Mr. Connolly, do you have the figures on that?

Mr. CONNOLLY. No, sir.

Colonel CLINGERMAN. It is not in money, sir, but in personnel. I can give you a rough estimate.

Mr. HOLIFIELD. Can you give me the man-years involved? I don't expect it in terms of money.

Colonel CLINGERMAN. I could give you exactly the number of people in terms of man-years, that we had at the end of fiscal 1956 that were working on the program. That is a total of 97 and 329, which is 426 man-years in fiscal 1956.

Mr. ROBACK. In any event, your budgetary problem as far as getting available resources for this program is concerned, is one of always reprograming and never of asking the Congress for a specific budgetary allocation for standardization work, is that correct?

Colonel CLINGERMAN. Sir, this will not be true starting in fiscal 1959. We then will budget for it in accordance with the guidance which we expect to get from the Department of Defense in the interim period.

As a matter of fact, they have a directive that is about to come down through our normal Comptroller and budget channels which will tell us how to budget for this, and it will be in time for the budget cycle in 1959.

But in 1956, 1957, and 1958, it has been necessary for us to use the existing resources, and we have done this in every case by merely telling the two commands involved to reprogram in order to do the job. We have made this one of the "must" programs in the Air Force, and we feel confident we will meet it; however, it has been at the expense of other Air Force programs, and it hasn't come too easy. My estimate of fiscal 1957 manpower is, roughly, a little over 600, and that is increasing.

As the program is going, especially the Air Materiel Command, who have the large job in simplification, they have had to continually put more people on it. We estimate that approximately 600 or a little more man-years will be expended by the Air Force on the program this year, and this will be enough to meet the schedule.

Mr. ROBACK. Do you have a money projection for a budgetary item? I mean, what would be the order of magnitude on a monetary basis?

Colonel FERGUSON. We haven't as yet put a figure in the budget estimate.

Mr. ROBACK. On the basis of trying to squeeze this effort out of your going program, are you in any position to know whether at any given time you could meet the assignments that were given to you by the Department of Defense?

In other words, can you say, "We had enough resources" or "we didn't have enough," since you are in the process of trying to find a little part time here and a little part time there?

Colonel CLINGERMAN. Sir, would you like to be specific as to fiscal year?

Mr. ROBACK. Make it for the 3 fiscal years discussed.

Colonel CLINGERMAN. In fiscal 1956 the Air Force position—and this is documented in correspondence to the Department of Defense—our position was that we could perform the original 1956 program.

This turned out to be impracticable for many reasons, as you have already heard.

We have also assured them that we will meet the 1957 program, no matter what we have to do in the way of reprograming, and we are on schedule and expect to continue on schedule. We expect to keep doing the same thing in 1958.

Our problem is a little bit simpler, I think, than perhaps the other services, because we figured, and perhaps incorrectly, that the Department of Defense did not have the money and people to give us. The most they could do was tell us how to reprogram. We preferred to reprogram ourselves and cut areas where we thought less important work was going on, so that we could accomplish this program.

Mr. ROBACK. What responsibility does the contractor, who builds air frames or engines, which is your main interest in procurement dollarwise, have for standardization?

Colonel FERGUSON. I would like to ask Mr. Dahm to comment on that.

Mr. DAHM. First of all, we ask the builder of any piece of equipment for us or who is designing the same, to incorporate within the design of this thing existing Government standard items to the extent we have specifications and standards existent, or we ask him, in the absence of these, to utilize wherever feasible existing recognized industry standards so that we have, as an input into our supply system in spare parts to support the end items, fewer new items, to the extent that this is possible.

These are reviewed by varying boards, et cetera, in the design proposals, in the prototyping of the aircraft. It is subject to a continual review, even down to the selection of spare parts that we have to put into our system to support this thing.

We make comparisons then of these items against the other items that we have already in the systems, with an effort to get the contractor to recognize that an existing standard could possibly be utilized in lieu of the special purpose item that he presented to us.

Maybe they have overlooked this in this great big beast that we build these days, or he gets us to recognize that a standard item could not be used, that indeed he did have a special purpose requirement here, and we have to accept this as being factual.

They are subject to reviews all the way through from the time of the original design proposals on the part of the contractor, even down until the thing is actually buried and a dead item.

After we have the items in the system, for example, spare partswise, these are subjected from time to time to interchangeability studies and item substitution studies, to find more or less standard items or an item for which we have a general purpose application or that we can get from several different sources of supply, rather than from one source of supply, to serve this particular requirement.

As brought out in the statement, it was through actions of this nature that we found we could eliminate 23,000 items from our supply system during calendar year 1956. These types of studies are continually going on in our system.

Mr. HOLIFIELD. I assume that a great portion of your budget is in the purchase of aircraft and aircraft parts and electronics?

Mr. DAHM. Yes, sir.

Mr. HOLIFIELD. And the rapid change in technology in that art makes it very difficult to standardize items, is that not true?

Mr. DAHM. This is the case. However, these same industries, partly because of our encouragement and partly because of their own recognition of the problem, have fostered a great deal of standardization through these various associations that we have mentioned in our statement.

They do this on their own, they do it in conjunction with us, and they do it sometimes at our suggestion.

Because we have these varying things in our system, we feel there could indeed be some standardization effort effected either by ourselves or with them, or by them alone, which would prove to be fruitful.

Mr. HOLIFIELD. Are you assigned a certain number of classes to work in as the Army is?

Colonel CLINGERMAN. Yes, sir.

Mr. HOLIFIELD. Or are you more or less dependent upon the other branches, and do you adapt your requirements to theirs?

Mr. DAHM. We are the assignee department, for 89 commodity classes and therefore have primary responsibility for these classes.

Mr. HOLIFIELD. What progress have you made in those areas in ratio to the job to be done?

Mr. DAHM. We have signed off in accordance with all of the things that we were scheduled to, in terms of the OASD schedule, that is, we completed detailed plans according to schedule. We are not delinquent at all in this point of time. Percentagewise on interim progress, I doubt whether we have figures here indicating whether we are 60 or 70 percent completed, and so forth, in other phases.

Colonel CLINGERMAN. You have already been given by Mr. Gay, I believe, the program which indicates the assignment to each activity, what F. S. C. class and its schedule and so forth and so on, but as a summary we are scheduled to activate 23 classes in fiscal 1957, and to submit 17 detailed plans and we expect to make it.

Mr. LIPSCOMB. How many detailed plans have you submitted to date on the 89 commodity areas?

Colonel CLINGERMAN. We submitted none in fiscal 1956 and the 17 that we will do this year will be the total that we have done to date.

Mr. LIPSCOMB. Have you finished any portion of the detailed plans for this fiscal year 1957? For instance, the Army testified that they had completed 20 percent in the first quarter.

Colonel CLINGERMAN. I had better let Mr. Connolly answer that.

Mr. CONNOLLY. I am Mr. Connolly of the Air Materiel Command.

As to date there has been submitted 2 detailed plans. They were both submitted in the second quarter of this fiscal year.

Mr. LIPSCOMB. Two out of 17?

Mr. CONNOLLY. That is correct.

Mr. LIPSCOMB. Is that on schedule or are you behind schedule?

Mr. CONNOLLY. No, sir, that was on schedule.

Mr. LIPSCOMB. That is for the first quarter. How do you speed up the rest of the other three quarters to complete 17?

Mr. CONNOLLY. This work is in process at various points of time in varying degrees of completeness. The terminal dates are scheduled, and actually, the work goes on on a fairly consistent and sequential

basis. Therefore, our production schedule for the fourth quarter is nearing completion in our agencies today, and getting ready for formal coordination.

Mr. LIPSCOMB. Were the 2 plans all you had scheduled for the first quarter?

Mr. CONNOLLY. For the first half of the year, that is all that was scheduled, as far as detailed plans are concerned.

Mr. FASCELL. May I inquire. What do you expect to complete in 1957 in the way of projects?

Mr. CONNOLLY. I would like to have Mr. Lee Coleman of the Air Research and Development Command answer that.

Mr. COLEMAN. We had originally estimated 1,545 limited coordinated projects. They were to meet the requirements within the Air Force.

To date we have completed 742 of those. I might point out here that this 1,545 figure is, as I say, to meet our own requirements, and is not a figure placed on us by the Assistant Secretary's people, and would not necessarily be a figure that we would go all out to meet. This would just indicate that we were generating specifications to meet a target number.

It may well be by doing less than 1,545 we are doing a better job, but in any case, our best estimate was 1,545, and we have completed 742 of those.

Colonel CLINGERMAN. Let me interrupt, sir. Though these were not on Mr. Dunn's chart, now he is going to cover the ones that were not on Mr. Dunn's chart.

Mr. COLEMAN. These are limited coordinated specs that are necessary to meet our development requirements of the Air Force.

Insofar as fully coordinated progress, we have estimated 202 scheduled for completion with 160 new ones to be initiated and 45 of those to be completed.

To date we have completed 58 of these. I might point out that nine of those were not really completed because after studying them the projects were discontinued. We found there was no point in carrying them any further, so we have completed 58 to date.

Mr. FASCELL. Your breakdown there on fully coordinated projects was 202 and what?

Mr. COLEMAN. 202 out of those projects already on the books scheduled for completion, and 160 more to be initiated that would meet the new requirements coming up. We arrived at that figure by looking back over previous years.

Mr. FASCELL. That is three hundred sixty-some projects.

Mr. COLEMAN. Right.

Mr. FASCELL. Scheduled for 1957?

Mr. COLEMAN. Correct.

Mr. FASCELL. You had no detailed plans in 1956, so no part of those projects were related to any accomplishment with respect to meeting a detailed plan?

Mr. COLEMAN. No, sir; that is correct. These are projects——

Mr. FASCELL. These are all 1957 procurement requirements?

Mr. COLEMAN. That is correct, yes, sir.

Mr. FASCELL. You are going to finish 17 plans in 1957 fiscal, is that right?

Colonel CLINGERMAN. Yes, sir.

Mr. FASCELL. What is your estimate with respect to the completion of projects in 1958 based on the 1957 plans?

Colonel CLINGERMAN. Sir, again, as Mr. Dunn did, if you want to break the projects out of a plan, we would have to go back and add them up and would have to give that to you later.

Mr. FASCELL. The point is you do do this, though?

Colonel CLINGERMAN. Yes, sir.

Mr. FASCELL. In scheduling your work, you have to know how much of your work you are going to schedule working on the plans you have submitted, and how much you are going to have to apply to new projects that occur within the year?

Colonel CLINGERMAN. Yes, sir. This is true, because when you make a plan to attack a Federal supply class, you study it enough to have a pretty good idea of what is possible, and, therefore, you can make a pretty good estimate of the number of projects that you are going to have to work on within that class. If it is a large class, naturally, there will be more projects.

Mr. FASCELL. I see. Can you give me an estimate, then, as to what the relationship will be between applying resources, and that is all types of resources, to current procurement requirements and filling out classes already submitted? In other words, is it 75–25, 50–50, 60–40?

Mr. COLEMAN. I would like to point out the difficulty we have shredding out estimates of effort on what is given to us as standardization program.

By definition of what is standardization under the DOD standardization program, it goes right into the very heart of our research and development work, and a large part of which is carried on by our contractors.

For example, the definition that is handed down to us as to what we shall report on as standardization effort includes any work done on a limited coordination specification. This, in most cases, is taking place in the contractor's plant and is accomplished by his development engineers.

Mr. FASCELL. What you are saying is, you can't report it by a project, then?

Mr. COLEMAN. Not by a project or even by man-hours or man-years as to how much of an engineer's time was spent in putting the pencil to the paper on what eventually becomes the specification.

Mr. FASCELL. Let's attack it another way, then. You had three-hundred-and-sixty-some projects required that were immediate procurement requirements for the year 1957. How did that compare with 1956, and how do you estimate it compares with 1958?

Mr. COLEMAN. It is approximately the same for all 3 years because it is an estimate.

Mr. FASCELL. In other words, your current procurement requirements at the present moment appear to be static.

Mr. COLEMAN. That is correct.

Mr. FASCELL. More or less.

Mr. COLEMAN. Depending on the overall budget which we are given for research and development.

Mr. HOLIFIELD. And that has been increasing every year, has it not?

Mr. COLEMAN. That is a moot point. To the Air Force it has, but

I think the commander of ARDC would say not down to his command level.

We read about this in the papers but, for example, in fiscal year 1957 we have not received any increase in our fiscal year 1957 budget for research and development.

Mr. FASCELL. I just can't see how, based on your testimony, I am at a loss to evaluate how in the world you ever expect any standardization with respect to the 17 plans that you are going to detail this year.

Colonel FERGUSON. Mr. Connolly, I think you should answer this question.

Mr. CONNOLLY. If I may attempt to approach your question, sir, the work of the existing phase projects and the projects to support a procurement action is integrated in a detailed plan.

Mr. FASCELL. If you happen to have a plan for that project.

Mr. CONNOLLY. If you have a plan for that project. In the areas of consideration, the plans that we have submitted, we have no existing projects in those areas.

Mr. FASCELL. This is encouraging. Go ahead.

Mr. CONNOLLY. So within this area it is clean. However, to take the converse, that it could exist. When it exists, one of the functions of the detail plan is to specify an integration method. On this method of integration at the time that you have an approved detailed plan, you pick up the continuity of those existing phase projects under the detailed plan. It is just a matter of giving credit at different points of time, and we are getting standardization either way.

Mr. FASCELL. This bookkeeping system is very intriguing, but what disturbs me is that while we are submitting all these detailed plans and whatnot, from a practical standpoint, by the time we get around to meeting current procurement problems, we will have reevaluated all of the standardization, so that actually there is no present review of current supply, and if this thing runs over a course of 15 years, we are wasting our time with all this administrative work.

Mr. CONNOLLY. Could I amplify my last remark in the area, then, of the supply logistics aspects?

Mr. FASCELL. Right.

Mr. CONNOLLY. In the detail plan one of the processes is to consider the existing projects, if there were any, another consideration is the fact of what is needed in simplification. What type and degree of coverage should be provided for this particular class or group of property?

In retrospect, then, you analyze what you are presently doing today in existing programs. In our definition and understanding, and practice in the Air Force, we not only review the efforts in the Department of Defense standardization projects, but also the efforts that are going on in our industrial associations. We work fairly closely with Aircraft Industry Association, the Council of Military Aircraft Standards, and other organizations.

So we integrate their efforts likewise, so that when we profile a class of property to analyze the need or an approach to standardization, we are not only looking at the existing phase projects or existing phase programs, we are also looking at the fixed projects we have in the industrial complex, and our own efforts that are related either directly

or indirectly to the overall standardization effort of the Department, some of which, may or may not be recognized either in part or totally under the budget concept of DOD standardization.

But the product of these other simplification or standardization programs all feed into the one DOD standardization program.

Mr. FASCELL. All right, sir; but here is the thing. You will work on, in the Air Force, 17 detailed plans for classes in fiscal 1957.

Mr. CONNOLLY. That is correct.

Mr. FASCELL. You have already testified that none of the projects in 1957 are related to any of the classes, and it may not be in 1958. It could happen. It may not be in 1959.

In fact, you may be 5 years before you run across a class that you have worked on that fits any of your projects. I don't know; this is a hypothetical case.

So this gives rise to the speculation that in your everyday projects, you finally get around to the point where you are going to give yourself credit in a class upon which you have already submitted detailed plans, but at this point you find that your plan has no relationship to your current requirement, because 5 years have already gone by since you submitted that plan.

Mr. ROBACK. Let the record show that the witness has been nodding approval as you spoke.

(Discussion off the record.)

Mr. CONNOLLY. Mr. Chairman, it is possible for anything to happen. What is practicable——

Mr. FASCELL. What is a reasonable speculation.

Mr. CONNOLLY. That is right.

Mr. FASCELL. Let's put it this way, and I don't mean to put you on the spot. Are you wasting your time with these detailed plans?

Mr. CONNOLLY. No, sir, we are not, and further, one of the other functions of the detailed plan is to schedule whatever projects are considered as required as a result of the simplification studies, or the analysis of what is needed in the class to effect the degree of standardization that is feasible and practicable.

The integration of these schedules, I think, gives us manageable and controllable areas of work, and they are synchronized with current requirements.

Mr. FASCELL. Right. Now, the next question is this: Is all this going to be done within a reasonable length of time so as to be valuable?

Mr. CONNOLLY. Yes, sir.

Colonel CLINGERMAN. Sir, within a detailed plan you may have old-phase projects and simplification studies and even technical analysis studies.

When you see an area that is fruitful for standardization, why, you schedule it as a project and with an estimated completion date on it.

But this does not mean that if something that you need to procure comes up, that you won't start a new project and integrate it in the plan during this year or the next year.

Those things will be going in and coming out all the time, but the regular standardization projects will keep going on until they are completed, which may take, sometimes perhaps, as a quickie, maybe 3 months or maybe a year. But not these projects that are related to procurement that keep bouncing in and out all the time.

Those things have got to be in response to an immediate need, and they have to be done. But the point I would like to make is, all the stuff will be done at the same time, not only what we have been doing insofar as supporting procurement, but we are going to have to put additional resources on to do these standardization phases.

Mr. FASCELL. In other words, you will eventually catch up within a reasonable and foreseeable length of time with stuff that is already in the system.

Colonel CLINGERMAN. Yes, sir; the initial simplification studies will take care of that.

Mr. ROBACK. What is the rationale of the division of labor here so far as the Air Force is concerned? Now, the Air Force concern with certain projects like, maybe, radar equipment, is readily understandable, but why were you assigned miscellaneous hardware?

Colonel CLINGERMAN. This is before my time, sir. I can't say why we got that.

Colonel FERGUSON. Let Mr. Dahm answer that.

Mr. ROBACK. The Air Force is the assignee for nuts and bolts and washers. Somebody is going to have to do this work. The question I am asking is: Is this an assignment made on the basis that everybody has got to do the work and you must have cats and dogs as well as the next fellow?

Mr. DAHM. This is part of the thing. In the case of certain of these hardware classes, we are great users of a lot of hardware items. I would say, for example, in the area of bolts alone we have probably got 50,000 different items in our system today. We may be the biggest user of various types of bolts.

Mr. ROBACK. That may or may not be, I am not questioning that. The point I am making is, that since a lot of these classes of items were assigned, in a sense on an arbitrary basis, because somebody had to do them, every service uses nuts and bolts, the fact that you have that class to live with and work on does not necessarily reflect the extent to which you procure items in these classes nor your desire to see standardization completed in these classes to aid your procurements.

Mr. DAHM. We have done a lot of work in the area, some of these hardware areas, for example, with the Bureau of Aeronautics in past years in the area of aeronautical standards, and also with industry in this regard. We have had a great deal of cooperation with the industry on fastening devices in the hardware area.

Mr. ROBACK. This may not be a question to put to you, but perhaps there ought to be standardization in the assignment of classes.

The Air Force is concerned with the packaging of bulk materials and the Navy is concerned with the packaging of materials that are crates and boxes, which are in a different class. You are standardizing the packaging of bulk material, is that right?

Mr. DAHM. I am not familiar that we have that particular one.

Mr. ROBACK. At any rate, one service is concerned with the standardization of the packaging of bulk materials, and another service, which is the Navy, is concerned with the packaging in crates and boxes and cartons.

Mr. DAHM. You must be referring to one of these old-phase programs, and not in terms of FSC.

Mr. ROBACK. These are classes that have been assigned under the DOD program.

Mr. COLEMAN. Mr. Chairman, may I point out that having sat in on the committee that helped to divide up the FSC's, there were a lot of FSC's that all three departments wanted, feeling they had prime interest in that area. There were a lot of FSC's that nobody wanted, and there were those in that middle gray area.

It wound up that we got some that we requested and some that were in the gray area and some that we definitely did not want. We had no prime interest, we feel, in sheet music, but we wound up with sheet music. There had to be decisions made, and they were made, as Mr. Dunn pointed out, at the ASD level on some of these classes that nobody wanted.

Mr. ROBACK. And it did not follow, did it, that the person who might have the biggest interest, let's say, was the biggest user, was necessarily the one who could most expeditiously standardize it. It did not necessarily follow, did it?

Mr. DAHM. No.

Mr. COLEMAN. It was not, I think, on the basis of who was in a position to most expeditiously standardize on that, but the prime consideration was given on the department having the prime interest in the area.

Mr. ROBACK. That is right, prime interest and not necessarily on the basis of how quick the standardization and how expeditiously the standardization work would go ahead.

Mr. DAHM. These incidents do occur in those classes where all three had a prime concern, and where each department, I think, equally had a capability to do something about it.

Mr. HOLIFIELD. Mr. Lipscomb.

Mr. LIPSCOMB. Mr. Chairman, I have a number of questions I feel it may be helpful to all of us if we can get them down in writing and submit them for reply. I would like to submit them to the Air Force, and have it submit the list to the other two branches of the services.

Mr. HOLIFIELD. We will give you a formal letter on these particular questions.

Mr. LIPSCOMB. First: What are the specific standardization assignments that you have been given?

No. 2: For which of the above assignments have you developed detailed plans at the present time?

The third is the size of the staff in the standardization organization.

No. 4: Do you believe that you are so organized and staffed to implement directive 4120.3 effectively?

No. 5: Do you believe you have fully implemented directive 4120.3?

Next: Have you seen the request that Mr. Lanphier has made to your department, referred to earlier in this hearing?

Part B of that is: Have you replied, and if not, how soon will you reply?

Colonel CLINGERMAN. We can answer a great many of those right away, if you care.

Mr. LIPSCOMB. I think if you could put them all together in the testimony, it will put the matter more in focus for the committee, because we are asking the same questions, and these will be coming in different parts of the hearing.

Colonel FERGUSON. And you will give us those in writing, I take it?

Mr. HOLIFIELD. The chairman will see that a letter is directed with these questions, and some additional questions, which will occur to our staff as a result of the material that has been submitted and the testimony that has been given. Those will be submitted to each one of the three services. (See appendix, exhibit J.)

Mr. ECKHART. I have just a couple of questions here.

Colonel Ferguson, under this FSC class assignment program, one department has preparing responsibility, and the other two departments participate and coordinate in the work that is being done by the assignee department.

Now, in the event that one of those departments does not have the requisite funds to carry out all of their programs, what effect would that have on the fiscal-year programs within your department?

Colonel FERGUSON. May I ask Mr. Connolly to answer that question, please?

Mr. ECKHART. Yes, sir.

Mr. CONNOLLY. At this point in time we have not experienced a problem. However, in the future there would be an effect on this type of a joint program. We must approach it together on the same production schedule, and we must work together, so it would have an effect if one department, so to speak, was on schedule and other departments were behind. There would be an effect on the overall posture of the program.

Mr. ECKHART. Now, assume that the participating department has responsibility for class 5010. Rather than do that work themselves, they contract it out to industry. How does the Air Force, as a participating department, in that FSC collaborate with the industrial organization that is handling that contractual work?

Colonel FERGUSON. Mr. Dahm.

Mr. DAHM. A lot of this would be done by correspondence, and it depends upon what type of contract you have.

We have gone into contracts in the past on services in the cataloging area. We have had the contractor prepare correspondence as if he were the same as us, on our letterheads, for example, and we sign them. This would be one way of getting this done.

Whoever chooses to contract out a portion of this work is responsible. He is not relieved of this responsibility in any regard just merely because he has seen fit to do it through contractual services. Let me elaborate with one more point.

In case there was to be a need for a meeting, the guy who had chosen to contract this thing may indeed send a contractor to the meeting to represent his interest or may accompany the contractor or may choose to take the fruit of the work that the contractor has produced and represent himself. He has these various options.

Mr. ECKHART. The contractor is actually performing the work assigned to the participating department, and not performing the work across the board in the FSC class?

Mr. DAHM. That is right. He is doing that portion of the workload that that particular activity has contracted out. The Navy is not contracting work which the Air Force is charged with doing, for example.

Colonel CLINGERMAN. We would have to work with somebody else's contractor the same as if the Navy was doing the work themselves, and

conversely, if we were contracting some out, the Army and the Navy would have to work with our contractor and some method, as Mr. Dahm described, inasmuch as he would work with us if we were doing it ourselves.

Mr. ECKHART. On page 4, Colonel Ferguson, you referred to a committee that was set up with a representative from the 3 military departments and 1 from the Department of Defense. You indicated that recommendations of that committee were accepted by the Department of Defense. To what extent were these recommendations accepted, if you can recall?

Colonel FERGUSON. Mr. Connolly, you were our representative on that; were you not?

Mr. CONNOLLY. I will take the question, sir.

The statement on page 4 with reference to the recommendations of the Department of Air Force for the establishment of a Programing and Scheduling Committee composed of representatives of the Departments and DOD was received by the Air staff people, and in the course of making recommendations through the Advisory Group and through correspondence, the overall suggestion was developed and then adopted mutually by the three military departments and the Department of Defense. This is the same committee that has been referenced in previous testimony of the Department of Defense.

Mr. ROBACK. In other words, the Air Force thought the assignments were unreasonable, and they wanted the committee to get together and shake them down; is that the sense of the thing?

Mr. DAHM. That was not our intent at all in this proposal.

Our feeling was that this was indeed a very large venture, that we had an awful lot to learn in this business in how to conduct the program, and we wanted to be very sure that any schedule that we set up was indeed a reasonable schedule, reasonable for attainment in a successful manner.

We did not feel it advisable for the Department of Defense, of which we were a part, to be at these early dates laying out a schedule of accomplishment and reporting this to Congress and to the world, in effect, that we were going to do this by some point in time, when we were not really sure that we could do it.

We were a party to this type of thing in the cataloging program. We felt that we should profit by these experiences, and it was our intent and suggestion that we set up this type of committee and look at this thing at least every 6 months, at least for some period of time, until we knew precisely what we could do and when we could do these things.

Mr. ROBACK. You mean you got hit over the head in the cataloging program?

Mr. DAHM. Yes, sir. No ifs, ands, or buts. We are a little bloody.

Colonel CLINGERMAN. The Department of Defense people do not know, for example, and it will be difficult for them to know, just where in each military department this responsibility for, say, any one FSC class is going to go.

If any one person were to sit down and draw up a list, you might find, for example, that our depot at Topeka would have 10 or 15 different detailed plans to work on all in 1 fiscal year.

We like to spread the work around a good deal better than that. If you are going to snow one depot under, you will not have another one doing the work.

Mr. ROBACK. I would like to ask one last question here in the judgment of these people who are responsible for this work.

Suppose that all of the work of the Military Establishment in standardization had been allocated on the basis of judgments by the participating services and technical subunits, as to projects, and that everybody had been awarded a series of projects based upon the things that he thought were important to do.

Do you think that that would have been a feasible approach to standardization, and you would not have had any conflict with the things you are doing now?

Mr. DAHM. I think this could have been done. It would have been very, very difficult for any group of people to sit down in any reasonable length of time and determine precisely each and everything that should be covered by so-called projects.

Mr. ROBACK. But you could have had the priority projects, and you could have had a system for extending your priority projects.

You could have been sure when you started to work on standardization that you were doing the most important things where the biggest payoff areas were, items with most urgent requirement for your procurement and maintenance.

Mr. DAHM. Of course, then, heading these lists would be the things that we were needing to buy, or buy status.

Mr. ROBACK. That would be in your judgment.

Mr. DAHM. Perhaps we would never get around to looking at all the things under such a scheme.

Mr. ROBACK. And you may not, either, now.

Mr. DAHM. It is not likely that this would occur.

Mr. ROBACK. And even if you do get around to it, it may not be that it would be productive.

Mr. DAHM. This is true, and this is one of the things we want to watch out for in the development of this detailed plan. We don't want to spend a lot of time and effort in some area that we know from past experience there is no payoff on.

Mr. ECKHART. Do you feel that the Department of Defense now is directing the program objectively, or do you feel they are participating with the three military departments in the development of the program?

Mr. DAHM. My summary of this, as an individual who is tied in with this program and who is tied in with the cataloging effort for a long period of time, I feel, taking into consideration the size and scope of this thing and the amount of effort that is going to be put into it, that at this point in time that I don't see how anyone can expect us to do anything better than what we have done at this point in time, in the way of planning for the conducting of the program.

We could say we should stop a lot of other things and devote more and more effort to it, but I think putting everything into its proper perspective, just as our statement reads, we are making very satisfactory progress at this stage of the game.

Maybe, as we know more, as we go further into this thing, our hindsight will show us to be wrong. This is yet to come.

I think probably we have not gotten to this point at this time—I don't know who could manage the thing any better than we could. I don't know what group of people you would get who could do this thing any better.

I don't know what group of people you could get who would have better past experience in this type of thing. You have got to remember we are embarking on something that there has been no precedent in.

Colonel FERGUSON. I would like to add to Mr. Dahm's comment there a little positive statement of my own, that it appears to me that the guidance that we are receiving from DOD level is adequate.

They are most cooperative. We feel perfectly free at any time to go in with our problems and discuss them, and we do obtain assistance, when necessary, in the area of policy guidance and policy statements.

Mr. ECKHART. I suggest, Mr. Chairman, that the answers are not responsive to the question. I was limiting it to the preparation of the fiscal-year programs and the assignment of the classes.

Is this a cooperative endeavor, or is the Department of Defense directing it?

Colonel CLINGERMAN. The chairman of the Program and Scheduling Committee is from the Department of Defense, and there are obviously things in there that they are probably pushing us a little faster in some cases than we would like. This is, no doubt, true.

From my point of view in Headquarters Air Force, I think they are very definitely directing the program. In any case, you cannot ever satisfy all three services, and you have to be arbitrary, which they have done when occasion demanded.

Mr. HOLIFIELD. We are going to have to close the meeting. I am sorry it was such a short session, but the human body will only stand so much.

Seriously speaking, I do want to thank you gentlemen for being as patient in staying as long as you have in this session. We only carried forward because Mr. Lipscomb and I are due at another committee at 2 o'clock. That is 5 minutes ago.

But I want to thank particularly the Navy for being so patient, and regret that we did not get to you, but we are going to have another day's hearing in which we will probably resume with the Army and the Navy at a time which I will have to allow you to know later.

For the time being, why, we thank you for participation. Give us some time to study some of the information which you have given us, and we will probably direct some letters to you, which we hope will be fruitful.

Colonel FERGUSON. If you feel the Air Force should return, we will be more than happy to provide any information we have.

Mr. HOLIFIELD. We hope we won't have to call you down from Dayton again, but if we do, we will let you know, sir.

Thank you for your cooperation. Thank you, Mr. Gay, for your help, too, and Mr. Dunn.

(Whereupon, at 2:05 p. m., the subcommittee adjourned.)

DEFENSE CATALOGING AND STANDARDIZATION PROGRAMS

TUESDAY, MARCH 12, 1957

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON MILITARY OPERATIONS
OF THE COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, D. C.

The subcommittee met, pursuant to recess, at 10 a. m., in room 1537, New House Office Building, Hon. Chet Holifield presiding.

Present: Representatives Holifield, Griffiths, Riehlman, Lipscomb, and Minshall.

Also present: Herbert Roback, staff director; James F. Eckhart, counsel; and Robert J. McElroy, investigator.

Mr. HOLIFIELD. The subcommittee will be in order.

In my statement opening the hearings on the defense cataloging and standardization program on January 30, 1957, I suggested that the subcommittee's interest in these programs was associated with the improvement of military supply management and operations.

Recently, I was genuinely disturbed by reading an article which indicated that the failure to make adequate progress in the standardization program is affecting our guided-missile program, particularly in terms of production costs. I have in mind a statement attributed to Adm. John E. Clark, director of Guided Missiles in the Office of the Chief of Naval Operations, in the February 25, 1957, edition of Aviation Week magazine in which it was reported:

> Admiral Clark said that missile programs have failed completely in the area of dollar cost. Unit costs have risen even after the missiles have been placed in mass production, and this has never happened before.
>
> Part of the blame, Clark said, was the military's outdated specifications and standards, delays in decisions, insistence upon changes conspired to increase cost.

I believe it is self-evident that those people working on the guided-missile program both in and outside the military departments deserve the highest degree of support possible, and on the basis of Admiral Clark's statement I am impelled to believe that they are not receiving it.

It may be that the standardization work of the military services is misdirected. Perhaps too much time, money, and effort are going into projects of little urgency or importance. The enormous costs of the missile programs and the vital importance of these programs to the national security present crucial issues to the standardization activities.

Now, I believe our first witness this morning is Colonel Koerner, of the Army.

Do you have a statement, sir?

FURTHER STATEMENT OF COL. ELDON A. KOERNER, CHIEF, STANDARDS BRANCH, PROCUREMENT DIVISION, OFFICE OF DEPUTY CHIEF OF STAFF, LOGISTICS, DEPARTMENT OF THE ARMY; ACCOMPANIED BY PAUL ROYCE, CATALOG SECTION, STANDARDS BRANCH; LT. COL. CRAWFORD D. LYONS, CHIEF, STANDARDIZATION SECTION; W. E. BRUCE, CONTRACT OFFICER, ORDNANCE TANK AUTOMOTIVE COMMAND, DETROIT, MICH.; L. L. NEWCOMB, CHIEF, STANDARDIZATION OFFICE, ORDNANCE TANK AUTOMOTIVE COMMAND, DETROIT, MICH.; LEO ARICO, CATALOG OFFICER, ARMY CHEMICAL CENTER; AND GEORGE RITTER, DIRECTOR OF CATALOGING, DEPARTMENT OF DEFENSE

Colonel KOERNER. No, sir; I have no prepared statement to offer at this time other than the one I submitted at our first appearance here. I am prepared to attempt to answer the questions you might ask.

Mr. HOLIFIELD. Mrs. Griffiths, do you have some questions?

Mrs. GRIFFITHS. May I ask what your position is?

Colonel KOERNER. I am the Chief of the Standards Branch, of the Procurement Division, of the Office of the Deputy Chief of Staff for Logistics.

Mrs. GRIFFITHS. What are your duties?

Colonel KOERNER. My duties are to act as Chief of the Branch and supervise the administration of the standardization program covered by the Standardization Section of my office; of the catalog program covered by the Cataloging Section of my office; of the ABC–NATO standardization programs covered by that section of my office; of packing, packaging, and conservation of materials covered by that section my office; and inspection and quality control covered by that section of my office in the Department of the Army.

Mrs. GRIFFITHS. Do you have people working under you that work on standardization?

Colonel KOERNER. I do. I have the departmental standardization office.

Mrs. GRIFFITHS. How many such people do you have?

Colonel KOERNER. Nine people in the standardization section.

Mrs. GRIFFITHS. You mean those are nine people out of the Pentagon?

Colonl KOERNER. That is right.

Mrs. GRIFFITHS. And do you have people out within various other branches that work for you or are directly responsible to you?

Colonel KOERNER. Not as part of my immediate establishment. Each of the technical services has a technical service standardization office in the office of the chief of that particular technical service, and then in each of the technical services, of course, in the various arsenals, laboratories, and other establishments there are standardization groups which are part of it.

Mrs. GRIFFITHS. Those people do not report to you?

Colonel KOERNER. They do not report to me directly as their supervisor. Their activity is monitored and administered by me, based on a program which we distribute to them. Their actions are subject to our approval.

Mrs. GRIFFITHS. Do you know many of those people there are within those various services that work on standardization?

Colonel KOERNER. I have a figure here. As of December 31, 1956, there were actually 1,132 people in the total standardization program, actually on the payroll.

Mrs. GRIFFITHS. On the payroll?

Colonel KOERNER. That is right.

Mrs. GRIFFITHS. Do you also have people for whose services you have contracted; that is, do you have contracts of standardization that supply information to you?

Colonel KOERNER. Yes; we have a number of the technical services that have contracted for one type or another of standardization service, and we have a complete list of all of those contracts that have been placed by the Department of the Army since fiscal year 1953.

Mrs. GRIFFITHS. How much money is appropriated for standardization for fiscal year 1957?

Colonel KOERNER. For fiscal year 1957 the present state of the apportionment for the standardization program in the Department of the Army is $11,800,000.

Mrs. GRIFFITHS. And how much of it has been obligated?

Colonel KOERNER. 2,412 standardization funds obligated as of January 31, 1957, were $5,596,808.

Mrs. GRIFFITHS. Do you know how many contracts have been placed?

Colonel KOERNER. Yes. For standardization services?

Mrs. GRIFFITHS. That is right.

Colonel KOERNER. As of this date there are 48 contracts for standardization services that are still in force that have not been completed, for a total of $885,556.38. Those are divided between four of the technical services.

Mrs. GRIFFITHS. So that you didn't actually obligate the full 7 million or anything close to it?

Colonel KOERNER. No; you see that $7 million or, rather, the $11,800,000 that I mentioned as being assigned to the program covers not only the contracts for standardization services, but to a greater extent the salaries of the personnel engaged in the Department of the Army in that program. The amount of contracting versus actual support by Army personnel is: roughly about 16 percent of the funds over the past several years have been used for contracting as opposed to approximately 84 percent for employment of Army personnel and the other expenses in connection with the program.

Mrs. GRIFFITHS. Who negotiates the contracts for standardization?

Colonel KOERNER. Those are either negotiated or prepared to be advertised for bid by the contracting establishments of the various technical services, or if the technical service has a centralized contracting establishment, then that establishment does it. If the standardization program of a service is broken down into the various arsenals and various commands of a technical service, such as it is in Ordnance, then the particular establishment of that particular arsenal or command would let the contract for the standardization service.

Mrs. GRIFFITHS. Do you have any idea how much a negotiator is paid?

Colonel KOERNER. That I can't tell you, but I do have a representative of the Contracting Office from the Ordnance Tank Automotive Command in Detroit.

This is Mr. Bruce, the contracting officer's representative from the Tank Automotive Command in Detroit. Mr. Bruce, can you tell us about what a negotiator is paid?

Mr. BRUCE. The salary ranges from a grade 5 for the trainee-type position to a grade 11.

Mrs. GRIFFITHS. What is a grade 5?

Mr. BRUCE. Approximately $3,500 or $3,600. The average is a grade 9.

Mrs. GRIFFITHS. What is a grade 9?

Mr. BRUCE. About $5,400 or $5,500, I believe. I am not too sure of that.

Mrs. GRIFFITHS. And don't negotiators deal with the heads of firms in Detroit?

Mr. BRUCE. As a general rule, yes, depending upon the type of work they do, Mrs. Griffiths. If they advertise, they don't. If it is pure negotiation, they do.

Mrs. GRIFFITHS. A $5,400 negotiator, for instance, is dealing with the vice president in charge of Buick, or the vice president in charge of Oldsmobile?

Mr. BRUCE. That could be so, but it might be a little bit higher. We put the better negotiators on the more difficult type of work. I would say a grade 9 or 11 would be handling that with the chief, perhaps, of the buying section, which would probably be a 12, to assist him.

Mrs. GRIFFITHS. Now, when you place these contracts for standardization, do you have someone supervise the contract? Is it the negotiator or is it production that supervises it?

Colonel KOERNER. No; the individuals who supervise the contract are those engaged in the standardization program who have established the task to be accomplished by the contract. Once the contract is negotiated, then that contract is maintained between the standardization office representative responsible for the program in that part of the Army and the group leader or task force chief of the contractor or engineering firm to whom the contract has been let.

Mrs. GRIFFITHS. Do you have some contracts for standardization that are something in addition to standardization; that is, there is cataloging or something else added in it?

Colonel KOERNER. It is quite possible that there are contracts placed with the same firm to cover some elements of cataloging as well as some elements of the standardization activity.

Mrs. GRIFFITHS. And do you have money obligated which obligates part of it from the standardization money, part of it from the cataloging, and so forth?

Colonel KOERNER. That is right. We do.

Mrs. GRIFFITHS. Do you have in those contracts a particular clause that refers to standardization or a particular paragraph that refers to standardization?

Colonel KOERNER. In the one contract I have in mind the task of standardization versus the task of cataloging is separated. Each is a specifically designated item in that particular contract. I might say, however, that is an isolated example of such a contract. Nor-

mally, contracts are placed for standardization purposes, or they might be placed for cataloging purposes. It is very seldom that we get one which is combined.

Mrs. GRIFFITHS. Do you have the standard forms for the standardization contract with you, or could you supply them? Could we have some copies of the standard form?

Colonel KOERNER. I have furnished to Mr. Eckhart samples of four contracts for standardization purposes. I might tell you, Mrs. Griffiths, that the forms used for standardization contracts are identical to the forms used for all other types of Government contracts, regardless of what the purpose might be.

Mrs. GRIFFITHS. Well, it has to have in it some phrase or some paragraph that relates to standardization. It has to explain the work in some way.

Colonel KOERNER. That would be the material which is inserted in the contract. What I meant to say was that the so-called boilerplate, the standard phrases, are the same as those under any formal contracts.

Mrs. GRIFFITHS. Well, now, when the contract is negotiated you have a cutoff date on it then?

Colonel KOERNER. I don't understand you.

Mrs. GRIFFITHS. Does the contract run for a year?

Colonel KOERNER. One year is the normal time; yes, ma'am.

Mrs. GRIFFITHS. You have a contract here negotiated through the Detroit Arsenal with the Detroit Designing & Engineering Co., at 15819 Schoolcraft. It is for $215,425. Do you know, or does this other young man know how many people are employed by the Detroit Designing and Engineering Co.?

Colonel KOERNER. Can you answer that, Mr. Bruce?

We also have Mr. Newcomb, who is here from the Chief of Standardization's Office in the Ordnance Tank Automotive Command.

Mrs. GRIFFITHS. How many people are employed by Detroit Designing & Engineering Co.?

Mr. NEWCOMB. I don't know as I understand the question.

Mrs. GRIFFITHS. How many people are employed by Detroit Designing & Engineering?

Mr. NEWCOMB. In total, I do not know.

Mrs. GRIFFITHS. How many people are working on this contract?

Mr. NEWCOMB. I think it is 18.

Mrs. GRIFFITHS. What are their general qualifications?

Mr. NEWCOMB. They are spelled out in the contract fairly well. They conform more or less to GS–11 or –12 engineers under civil service.

Mrs. GRIFFITHS. Are they all engineers, do you know?

Mr. NEWCOMB. Not all graduate engineers.

Mrs. GRIFFITHS. How much work have they done under this contract? Do you happen to know how much work they have done under this contract?

Mr. NEWCOMB. Specifically, I haven't any figures I can give you. The contract has been in existence actively since either late November or the first part of December, and I have no particular figures that I can turn out.

Mrs. GRIFFITHS. Could you turn some in later?

Mr. NEWCOMB. Oh, yes: sure.

Mrs. GRIFFITHS. Will you check on it and tell us exactly how much they have done?

(The information supplied is as follows:)

Of the approximately 300 items of workload proposed to be accomplished under contract No. DA-20-089-ORD-38260, with the Detroit Designing & Engineering Co., Inc., during the 12-month period beginning November 14, 1956 (the date of the contract), 161 items had been assigned to the contractor and worked on by him as of February 28, 1957.

Of these 161 items, 33 had been completed, 22 were from 80 to 99 percent completed, 36 were from 50 to 79 percent completed, 45 were from 20 to 49 percent completed, 25 were less than 20 percent completed.

Mr. NEWCOMB. Exactly how much they have done brings in a lot of inprocess work. We will have to give an estimate of the approximate percentage of completion of certain tasks.

Mrs. GRIFFITHS. These people that are working on this contract, do they have equipment other than paper and pencil and drawing materials?

Mr. NEWCOMB. No.

Mrs. GRIFFITHS. They don't. And if there are 18 people working on it for 1 year and each of them were paid $10,000, you have only $180,000 of $215,000.

Mr. NEWCOMB. Wait a minute. That $215,000 figure was an approximation on a 2-year basis, wasn't it, or am I wrong, John?

Mr. BRUCE. There is overhead in there, Mrs. Griffiths; that would be in addition to the drawing of salaries plus a fee.

Mrs. GRIFFITHS. Pardon?

Mr. BRUCE. There would be overhead added to the salaries of the individuals.

Mrs. GRIFFITHS. Isn't 15819 Schoolcraft just about out at Greenfield?

Mr. BRUCE. It is out in that vicinity of Detroit.

Mrs. GRIFFITHS. Well, there is not much overhead.

Mr. BRUCE. I think the overhead is about 15 or 25 percent, if I am not mistaken. So that one-quarter of the total salaries would go for overhead, which includes, of course, the social security taxes and other items of goodwill, leave, and things like that.

Mrs. GRIFFITHS. Did you ever actually check the rent out there?

Mr. BRUCE. No; but we do get an overhead study which shows what the rent would be. We don't have the analysis at hand, but I can get that breakdown.

Mrs. GRIFFITHS. It won't be necessary, but 18 people at $10,000 a year would be $180,000, and 20 percent overhead, if you gave them 20 percent, you still have $36,000.

Mr. HOLIFIELD. Will the witnesses please speak a little louder so that the reporter can hear better.

Mr. BRUCE. Mrs. Griffiths, 18 people at $10,000 would be $180,000, plus 25 percent overhead would be $40,000 or $220,000.

Mrs. GRIFFITHS. Is 25 percent a standard overhead?

Mr. BRUCE. I don't think there is a standard percentage because in this type of work they range from 15 to approximately 35 percent.

Mrs. GRIFFITHS. I think that area of Detroit would be 15 percent.

Mr. BRUCE. Well, of course, you have to have a lot of background and experience in this price analysis. Rent is not the only item.

Mrs. GRIFFITHS. I want to congratulate you. I first understood you people weren't able to produce these contracts, that nobody out at the

Pentagon knew exactly how many contracts you had at any one time, and I was just prepared to tell them to call out at Detroit and I am sure you can get all of the contracts for research and development in 20 minutes placed in the Detroit area.

Colonel KOERNER. I have a list of everything that has been placed since fiscal 1953 in standardization services for all of the Army, and we have also turned in to Mr. Eckhart during conference a specific list giving complete details, contract number, contractor, date, contract dollar value, and task to be accomplished of every standard service contract that the Army now has in force, and that information is available now to the committee.

Mrs. GRIFFITHS. Good.

Well, I am sure I would like to know and I am sure the chairman would like to know, too, how far you have gotten on these contracts, whether you have actually standardized anything, and if you have how much money have you saved.

Colonel KOERNER. Well, we have turned over to Mr. Eckhart quantitative performance data on three examples of contracts telling exactly what is involved in the contract, and what has been done to date. Forming a dollar estimate of the amount saved might be a very difficult thing to do.

Did you have a particular contract in mind, Mrs. Griffiths?

Mrs. GRIFFITHS. No, not at all; but I was thinking on any of these if you are the supervisor you must know pretty much what has been done and whether or not they have accomplished the objective and how much money it is going to save. You must have that information pretty well in hand.

Colonel KOERNER. You see contracts for standardization services are for services rather than for employment of personnel, as say, the employment of 18 engineers or something of that sort. Contracts are placed for the accomplishment of certain services, like reviewing all drawings and revising them and bringing them up to date, for rewriting a specification, or writing a certain number of specifications or standards, and those are listed in the contracts, and it is that accomplishment which is a real measure of the value received in the contract rather than an analysis of how many engineers are engaged on the contract, how many typists and so on, you see.

Mrs. GRIFFITHS. I agree with you wholeheartedly, but what you are paying for it requires the knowledge of how many people are working on it, whether you are overpaying the mark or you aren't.

Colonel KOERNER. That is right. In placement of a contract, of course, you have to make an evaluation of the cost that the contractor expresses to you for that accomplishment versus the data that you have available in that command for what it would cost the Army using their own personnel and own facilities and that sort of thing, if they were available.

You see, as we might have mentioned before, one of the big reasons for placing such contracts has been that engineers have been extremely difficult to find, and here we are trying to buy engineering service at as modest a price as we can.

You see we save a great deal, too, in this respect: We are not building large groups of civil service personnel, which within a few years might have to be RIF'd. If we hired hundreds of civil service person-

nel to do the work that is being done to a considerable degree by some of these contracts, we would have to have additional facilities, workspace for them, desks, typewriters, buildings, and all of the other paraphernalia that go with additional people on the Federal payroll system. So there are a lot of intangibles that don't show up in a direct comparison of the contract against doing it with Army personnel.

Mrs. GRIFFITHS. I am not interested in doing it by contract as against using your own personnel, but I am really interested in knowing whether you are paying too much on the contract, first, and whether having paid an amount you are actually getting the services you have contracted for, if anything is being accomplished, because if you are not really saving any money, if nothing is being standardized, you might as well cut out placing these contracts.

Colonel KOERNER. One specific example might be the case that Mr. Eckhart asked about, the packaging and preparation for storage of a tank. The one firm had that as one of their tasks, the preparation of a new specification. That specification was standardized and was developed by the firm, passed through the Ordnance Tank Automotive Command in Detroit and has now been standardized and is now the current revision of the specification. So it does result in very real accomplishment.

Mrs. GRIFFITHS. But can you measure?

Colonel KOERNER. Can we measure?

Mrs. GRIFFITHS. Do you have the measurement at hand at all times?

Colonel KOERNER. At my level we do not have a quantitative measurement of the work accomplished by contract versus by Army personnel. However, they would have it out in the various commands that let these contracts for standardization services, and in talking to the standardization people I know from experience that by their constant review of the accomplishment of the contractors in any case where they find that the speed or the amount of accomplishment is not up to what they believe is standard, the contract can be terminated and that contractor not used.

Mrs. GRIFFITHS. I think it would be a good idea if you had the information available. If you were to ask for it, I think that would push it along. I seem to recall I negotiated some of these, and I don't recall ever inquiring whether they got anything done.

Colonel KOERNER. You see, our measurement of the accomplishment of the various type services is how much standardization, how many specifications, detailed plans, and how many of the other quantitative things they accomplish, provided they don't go beyond the funds allotted to them. We haven't maintained a separate work accomplishment record of contracting versus personnel. Certainly it is expected that the technical services will do it. If they are going to maintain it, I can't have that information available and check it. If we find that the technical services are not making efficient use of the funds that we defend in the budgets for them, certainly then we are going to take action to modify the way they are working, and I can agree with you then we ought to have that information available.

Mrs. GRIFFITHS. If you keep inquiring they will keep inquiring from the contractor, too, I feel certain.

I might say that I hope that it has been amply pointed out to this subcommittee that negotiators are underpaid.

Mr. ECKHART. Mr. Chairman, in connection with some of the material that Mrs. Griffiths covered, I would like the record to show that it has been made available to the staff, and on one contract in the testing of gasoline-consuming, industrial-type, internal-combustion engines, the work accomplished under the contract was about 24 to 28 inches high, weighs about 10 or 15 pounds, and, of course, it would not be appropriate to include anything like that in our record.

Mr. HOLIFIELD. Mr. Lipscomb, do you have anything?

Mr. LIPSCOMB. No questions.

Mr. HOLIFIELD. Mr. Eckhart?

Mr. ECKHART. Colonel Koerner, you discussed this T–43–E–1 tank specification for storage and packaging. Now, there is only one tank that has that designation and there is a limited number of them in the supply system. Now, in the event that that tank is stored in accordance with that specification, how do we relate that to the standardization program?

Colonel KOERNER. Well, if a decision is made, at whatever level the Army might make the decision to store those tanks, then they would be stored according to the standard developed, and in this case we developed MIL–P–14175. Now, this specification covers preparation for storage and shipment, and it is developed covering three different types of storage. It has one coverage for limited storage of domestic shipment not exceeding 90 days; type 2, for standby storage or overseas shipment over 90 days to 3 years; and one type 3, for long-term storage of over 3 years.

The organization that receives, you might call it, the work order to prepare these tanks for storage and shipment would check their files and get the latest issue of this specification and all of its subsidiary specifications and would direct their activities according to the guidance of this standard.

If they place it out on contract, to be done on contract, the negotiation or the information for bids sent out would quote preparation for storage and shipment, whatever type would be desired, in accordance with MIL–P–14175 of a certain issue. This one is October 12, 1955. Then the preparation of the tank would go along in accordance with this standard which has been issued.

Mr. ECKHART. Now, is there any way that you can determine what types of projects will utilize the standardization funds? In other words, what are the all-encompassing definitions of standardization work for which the standardization funds can be allocated?

Colonel KOERNER. Well, standardization activities contracts may be of, you might say, many types. They might be bringing drawings up to date to make sure that they include all of the newest engineering changes in a piece of equipment. They might be, in the case of the engineer contract that we gave you the work performance records on the testing, or, rather, the witnessing of tests made by different manufacturers in an attempt to qualify their product for a qualified products list, since the maintenance of a properly qualified list is again a part of the standardization program.

Mr. ECKHART. Do you know, Colonel, whether or not there is any agreement between the military services as to what type of work is authorized to be performed with the standardization funds?

Colonel KOERNER. I am not sure that I quite understand. Do you mean, has a standard of the type of thing to be done been set up for contractors?

Mr. ECKHART. Exactly.

Colonel KOERNER. Well, the overall standardization function under the Defense standardization program has been set up in the document M–201, and that tells you the types of tasks and the types of things that are done in the standardization program. Any other type of activity that a depot or a technical service or an arsenal, or anything of that sort, is carrying on as a part of their standardization responsibilities may be contracted for. As for example, in reading over some typical tasks that are accomplished under standardization contracts——

Mr. ECKHART. Excuse me, Colonel, before going into that can you read into the record the definition of standardization and try to relate it back to the T–43–E–1 tank specification, for example? It is on page 2.

Colonel KOERNER. Yes, I wanted to make sure I had the most appropriate definition in the glossary of terms, which is a part of Standardization Manual M–201.

Mr. ECKHART. This is the latest manual put out by the Department of Defense?

Colonel KOERNER. Yes. There is one presently under preparation, which will not change that definition, but which may change certain of the methods of operation, sir.

Standardization is defined as the process of establishing by common agreement engineering criteria, terms, principles, practices, materials, items, processes, equipment parts, subassemblies, and assemblies to achieve the greatest practicable uniformity of items of supply and engineering practices to insure the minimum feasible variety of such items and practices, and to effect optimum interchangeability of equipment, parts, and components."

Mr. ECKHART. Now, does the preparation of the specification for the storage of the T–43–E–1 tank come within the confines of that definition?

Colonel KOERNER. Yes; because it establishes standards of practice and materials. This specification establishes the materials to be used in the preparation and the manner in which they are applied to the tank. These materials and method of application have been found by the Tank Automotive Command to give the maximum protection for the tank in storage, for the minimum cost of preparation.

Mr. NEWCOMB. Could I say something, Colonel Koerner?

Colonel KOERNER. Yes, sir.

Mr. NEWCOMB. On page 6 of the same document, sir, it relates back to the directive, or, rather, Public Law 436, to provide for achievement of the greatest practicable degree of standardization of methods of packing, packaging, preservation of such items.

Mr. ECKHART. Thank you.

Now, in connection with that, would it be feasible for the Ordnance Tank Automotive Command to revise the specifications for the packaging of the M–48 or M–48–A–2 tank so that that would be applicable to several tanks rather than having a specification for the storage of each tank? I did notice in the list of contracts you supplied the subcommittee there was another specification for the storage of the M–48–A–2 tank. If we are going to prepare a specification for each item, particularly when they are similar items like a tank——

Mr. NEWCOMB. They are similar items, sir, but there are different problems. The attempt to standardize methods of packaging for both procurement purposes and for maintenance and storage has been carried on out in the project which resulted in MIL Standard 281, which was a documentary standard intended to cover the whole field of preservation and packaging of vehicles for shipment and storage.

Mr. ECKHART. Is it the practice right now to prepare a specification for the storage of each item because there are some dissimilarities, but basically they are the same item?

Mr. NEWCOMB. Basically, it is still the practice to prepare separate specifications because the degree of similarity in processing is limited. We have a project at the moment to revise MIL Standard 281 in order to try to bring out a greater degree of standardization. We are getting it from two fronts, in other words, the individual documents, and also trying to tie together the standard aspects of the various individual documents into a military standard.

Mr. ECKHART. Back to my original question to try to get a yes or no answer, would it be feasible to consolidate the specifications for the M–48 tank, the M–48–A–2 and the T–43 tank in terms of packaging requirements?

Mr. NEWCOMB. Yes, it is feasible. We are working on it and trying to do that just right now.

Colonel KOERNER. I would like to point out, Mr. Eckhart, that you would find if we had here the standard or the specification for preparation for storage and shipment of one of those other tanks, that while this piece of paper might well be different, many of these subsidiary specifications, drawings, and standards would be the same. That is correct, isn't it?

Mr. NEWCOMB. That is correct.

Colonel KOERNER. So that this gives details applicable to that particular tank and the subsidiary drawings specifications carry the coverage of the materials used and that sort of thing.

Mr. ECKHART. Now, in connection with the 1957 fiscal year schedule as given to the Department of the Army by the Assistant Secretary for Supply and Logistics, is it possible to determine at this point in time whether or not the Army will be on schedule?

Colonel KOERNER. We have made a continuous analysis of our ability to complete the schedule starting with the time that we first got it, and we can make such an analysis.

Mr. ECKHART. Has such an analysis been made?

Colonel KOERNER. Yes; our present indication, based on the difficulties encountered, is that we will accomplish of the mechanical program, that is, the number of letters of activation and the detailed plans, approximately 90 percent of that DOD assigned program. However, that is not a full measure of our workload because we will also be spending a great deal of standardization effort on the development of specifications and procurement descriptive material to enable procurement within each of the technical services, all of which is part of the standardization program although the work done does not immediately reflect upon the number of letters of activation or the number of detailed plans developed. So that of the mechanical DOD program, to answer your question directly, 90 percent accomplishment is our present expectation.

Mr. HOLIFIELD. Is that June 30?
Colonel KOERNER. Yes, sir.
Mr. HOLIFIELD. 1957?
Colonel KOERNER. That is right, sir.
Mr. ECKHART. Is the 1958 program a more ambitious one than the 1957 program?
Colonel KOERNER. Yes. We had 43 classes to be activated during fiscal year 1957. During fiscal year 1958 we have 74 classes.
Now, I might tell you an additional part of our analysis indicates that provided we are able to maintain the fund level that we have asked for fiscal year 1958 and the personnel level which has recently been expanded by the Department of the Army for standardization purposes, we expect to accomplish in fiscal year 1958 not only the fiscal year 1958 assigned program but also this slippage, so called, that we might have had in fiscal year 1957.
You see, as I might not have pointed out to the committee, but I did in conferences, as of about the end of February the personnel involved in the standardization program were increased; that is, the spaces allotted to the standardization program were increased to 2,287 as an end strength for standardization purposes at the end of this fiscal year and the start of fiscal year 1958.
Mr. HOLIFIELD. You consider you have plenty of people allocated then and sufficient funds to do the job?
Colonel KOERNER. That is right. While we may encounter slippage in fiscal year 1957, we expect to catch up with that slippage and accomplish the fiscal year 1958 program.
Mr. HOLIFIELD. Were you able to get your request in your 1958 budget? Did you have the time to get in the requests that you needed?
Colonel KOERNER. Yes, sir; those requests have been prepared. We have not yet made an appearance before the Appropriations Committee for those funds.
Mr. HOLIFIELD. What is your supplementary request from your original schedule?
Colonel KOERNER. Well, at the present time the figure that we have put in for fiscal year 1958 is $15,250,000. That is subject to adjustment, of course, during the hearings and all of the other budget processes.
Mr. ROBACK. Before we get away from tanks I would like to ask a question. This T–43 tank was building for how many years?
Colonel KOERNER (to Messrs. Bruce and Newcomb). Can either of you gentlemen answer that?
Messrs. BRUCE and NEWCOMB. No.
Mr. ROBACK. It was building for at least 5 to 6 years, wasn't it?
Colonel KOERNER. I can't answer that question, sir. I don't know positively. We don't have that information available.
Mr. ROBACK. Well, the production process that covers the T–43 tank, let us assume it is correct as 5 years going. Why do you have to at this late stage of the game have a contract to determine how to package and store it? Why wasn't that a part of the production process?
Colonel KOERNER. Well, I will have to remind you that that contract, sir, was placed as part of the fiscal year 1956 program and has been continued into fiscal year 1957 since funds were available. That was one of the earliest tasks accomplished in fiscal year 1956. The revision of this packaging specification was approved as of October 12,

1955, sir. So that has been over a year and a half since that was finally approved. So it isn't something, sir, that is as of the last few months.

Mr. ROBACK. Well, the question is why wasn't the manufacturer of the tank required under his contract to specify how it would be packaged and stored and shipped?

Colonel KOERNER. I can't answer that question, sir. Can anyone from Ordnance answer that?

Mr. NEWCOMB. I would like to try to answer that, sir. The contract did have requirements, I am sure, for preservation and packaging for shipment and storage. The specification as it exists is also used for maintenance in storage for reprocessing to see that the material is kept in good condition, so that it is an active document despite the fact that the vehicles are no longer in production as long as the equipment is in storage.

Mr. ROBACK. I don't know if I understand the answer, Mr. Chairman. What I am trying to find out here is: Here is a tank that has been under production for, let us assume, 5 years. At this stage of the game the question arises, How shall we package and store this tank? Why do we have to let a contract to another firm to determine now how to package and store a tank?

Mrs. GRIFFITHS. Because it has been setting out in the open probably until now.

Mr. NEWCOMB. No, sir; it is not a question of finding out how we should do it, as far as that goes. The materials and processes that are used in any sort of an operation are always subject to revision. The work, as Colonel Koerner pointed out, was accomplished in the document published in October of 1955. The document probably should be revised again in the near future to keep it up to date again.

Mr. ROBACK. Are the requirements different because there have been modifications in the tank? Is that what you are saying?

Mr. NEWCOMB. No, sir; just presumably improvements in the art, learning how to do the job better for the same amount of money, and things of that sort.

Mr. ROBACK. You said you were trying to arrive at some sort of standardization for the packaging of different tanks. Why couldn't this contract have been let for the packaging, storing, and shipping of tanks rather than for this particular tank? Why didn't you write an overall contract?

Mr. NEWCOMB. MIL Standard 281, sir, was in process for approximately 3 years. It is an awfully lot more difficult to get agreement on how you are going to approach all problems within a given area than it is to get agreement on how you are going to solve a certain problem in a specific area. We were working on the two problems concurrently, but, as you indicated, we have to have something that will fit into a procurement contract and solve the problem immediately at hand while you are attempting to build standards which will make the job simpler in the future.

Mr. ROBACK. When you let a contract for either standardization or specification work, suppose the specification is not up to par, how do you know that and what do you do about it?

Colonel KOERNER. Are you asking for Ordnance example or a general example?

Mr. ROBACK. I am just talking generally now.

Colonel KOERNER. How do we know what to contract for? The standardization offices have been approached by different parts of the technical services with an indication that they feel that the specification of the standard for a product or operation needs to be brought up to date, and that is assigned as a task. As the various other tasks are assigned and gathered together by the standardization offices of the technical services, there are decisions made as to whether to contract them out or to do them in your own operation. Then a contract is negotiated or placed by advertising to accomplish a workload.

This particular standard, for instance, is one of several hundred that are listed as a workload for accomplishment in this particular contract. So that that is the method of operation.

As far as progress is concerned in the contracts which run for a year, a listing is normally made as to the task to be accomplished in that 1-year period, so many specifications to be prepared in draft form, so many drawings to be revised, so many packaging data sheets to be prepared, and various other manners of expression of the workload. As the contractor delivers the requirements expressed in the contract to the standardization office, those are checked off as accomplishments against the workload assigned to the contractor in the contract.

Mr. ROBACK. How do you know the specification is going to be useful?

Colonel KOERNER. That can be determined by review in the standardization office and by coordination of the standardization office with the engineering elements of the technical service responsible for that type of operation.

Mr. ROBACK. Let me put the question this way: If you don't have enough personnel yourself to write the specification, how many personnel do you need to determine that the specification will work?

Colonel KOERNER. Sir, you can use less personnel to review the work of contractors and of subordinates than you would have to have if you had to do the mechanical job of doing the testing and research work which goes into developing a specification and standard. So it is a question of doing a review job, a check job by Government personnel of the contractor's accomplishments, rather than sitting down and writing out the specifications or standards, which takes time.

Of course, in the contracts provisions are made, such as in this one, which is an Ordnance contract, that all work shall be subject to inspection and check at any time during the performance of the work therein. It shall be subject to inspection by the Industrial Division of the Tank Automotive Command prior to acceptance by the Government. In the event that any of the work performed by the contractor is found to be unsatisfactory because of failure to conform to special regulations or because of carelessness or negligence attributable to the contractor or because of illegibility, the Government shall have the right to reject such work and require its correction. Correction shall be made promptly after notice to do so and shall be made at the contractor's expense.

Mr. ROBACK. Have you ever defaulted on any of the contractor's standardization work?

Colonel KOERNER. I have no knowledge of any contract terminated for faulty standardization work. I have been told of some contractors

whose activities have been cut off so far as receiving further contracts for standardization activity.

Now, I have two technical services here. Have we ever terminated a contract for standardization services that you know of?

Mr. NEWCOMB. No, sir.

Mr. ARICO. No.

Colonel KOERNER. No.

So we have terminated none, although some contractors have been taken out of the business, as it were, when their work was found not to be as good as it should have been and other contractors could be found with whom to place the work.

Mr. ECKHART. I have no further questions, Mr. Chairman.

Mr. ROBACK. There is a question that came up on a contract for cataloging. Did you want to pursue that for a minute?

Mr. ECKHART. Not with the Army people. There is a representative of the cataloging program here.

Mr. ROBACK. We ought to pose the question and dispose of it before we go to the Navy witness. The subcommittee was given to understand that the identification of the cataloging program had been completed, and our interest was directed toward an outstanding contract for cataloging. We wanted to find out since it was represented that this was cataloging for new items whether future cataloging was going to be done on the basis of putting out contracts or whether the system had been so developed that these things can be cataloged within the services?

Colonel KOERNER. Well, I have a gentleman from the Chemical Corps who can answer specific questions on that, but as a generalization I would say that the major portion of the cataloging activity will be carried on by Government personnel. In this particular case a special workload had approached and contract was believed to be the best way to accomplish it. It was for cataloging activities in connection with new items or other phases of the cataloging program which had not already been accomplished.

Now, we have here Mr. Arico, of the Army Chemical Center in Maryland, who will be able to answer specific questions regarding that particular contract that you have in mind.

Mr. ECKHART. Before he testifies, Colonel Koerner, you just made a statement that this contract could have been for certain services that had not been completed as a part of the identification phase of the program.

Colonel KOERNER. Not as part of the identification phase of the program, sir, but as part of the overall cataloging program. I would like to make that correction.

Mr. ECKHART. And actually this contract that is under discussion to which Mr. Roback referred is a contract with the Chemical Corps, let to a New York contractor which was part of a $150,000 contract, $80,000 of which was for the cataloging of Chemical Corps items. The breakdown of the work elements under that contract included:

1. New descriptive-type Federal item identifications (new items of supply).
2. Revised descriptive-type Federal item identifications.
3. Technical service catalog data publications.
4. Federal catalog data files.

This is broken down into three time phases here, running from September 24, 1956, to September 23, 1957. What makes this signif-

icant, Mr. Chairman, is that the identification of the Federal catalog program was supposed to have been completed by the end of calendar year 1956, and we raise this question to determine whether or not these were items that should have been identified at that time or whether these were new items that came into the system.

Now, could you go on from there, Colonel Koerner?

Colonel KOERNER. Well, perhaps Mr. Royce could answer particular questions. I might tell you though that they were for new items coming into the system or for phases of the work which were not a part of the identification of old items.

Mr. Royce?

Mr. ROYCE. I think, Mr. Eckhart, your recitation is a good summary of the contract, but perhaps what has not been called to your attention is that once we get into what we call the maintenance phase, there is always going to be new items entering the system. The cataloger is constantly faced with the problem of establishing cutoff dates. He has to decide for himself when he is finished. There is data being generated all over his supply system. Some of it may not have reached his desk or his office at the time. In the contract you are talking about we did not think it was unusual that the Chemical Corps would contract for both some new descriptions as well as for revision of some old ones. All of us in the cataloging effort are convinced that now that we have a good Federal catalog system established under Public Law 436, there goes along with that the responsibility to keep it alive and to prevent it from becoming static.

Mr. Arico here probably knows much better than I do the kinds of items that he planned to have described under this contract, but I notice that you mentioned two other elements in this contract which might require some explanation.

In addition to new descriptive items and revisions of existing descriptions, you mentioned that there were technical service data publications and also catalog data files. Army budget guidance in this field permits these types of operation to be charged to cataloging. The first are publications by which the Chemical Corps announces these new numbers, new names, and new data within its own command. All elements of the command must be informed or we will not really be making full utilization of the data. For that reason they publish internal documents to alert their procurement people, their depot people, their technicians in research as to what this new data is.

The other item you mentioned was maintenance of Federal catalog data files. I am sure you have been told by defense officials what a terrific file maintenance problem this cataloging program has created. If the data is not cared for and is not constantly kept under surveillance, then the good effects of this program will be lost, and for that reason they have chosen to contract for maintenance of this card file.

Mr. ECKHART. Mr. Royce, my comments were not intended to be critical of this contract or this type of contracting, but rather just a request for information. I wonder if you could advise the subcommittee approximately how many new items you expect the Chemical Corps to generate over a 1-year period?

Mr. ROYCE. I am not in the position to answer that, but I believe Mr. Leo Arico, who is here from the Army Chemical Center, and is a member of their cataloging staff, might answer that.

Mr. ARICO. When we use the word "new" it means new to the supply system, but not necessarily an item coming out of research and development. Part of this workload is the result of the Department of the Army's transfer of the logistics assignments which has been going on for several years.

Now, when another technical service was requested by the Chemical Corps to physically transfer the stocks, the Chemical Corps expected the standard item, as designated by the losing service, to be transferred. However, it was found when the stocks were received that there were substitute items included. In effect, if a chemical was supposed to have been in a 1-pound bottle, we found it was also in a quarter-pound bottle, a 5-pound bottle, or in the 55-gallon drum, and they were not cataloged during the identification phase because we were more concerned with identifying our normal supply items. These will be issued, however, and, by attrition, disposed of. I don't know if I have made that clear.

Mr. ECKHART. Would it be a correct interpretation of your remarks to say that there were some items which existed in the system which could have been identified and possibly should have been identified prior to calling the identification phase complete?

Mr. ARICO. No, sir; I wouldn't want to say that for this reason: As far as the usage of these items by groups in the field was concerned, to maintain the equipment and to permit them to perform their normal duties, it was not necessary for these items to be identified. In fact, the equipment in the field could be maintained by the items which appear in the maintenance and supply manuals and which constitute the normal supply items in any service. These were over and above that quantity. However, it was an unexpected workload, and as these items were received we found that we had not budgeted to do that work. We couldn't do it.

You might say that after we had completed the identification phase of our regular supply items, we paused and determined what would be needed to identify these additional items, the identification of which would assist supply management operations considerably.

Mr. HOLIFIELD. Well, may I ask you a question there? If I understand you correctly, and we will go to your example of a 1-pound bottle of chemical as against a 55-pound drum. Now, unless you had heretofore been given an identification for the 55-gallon drum, which would have been different from the 1-gallon jar, you in effect had an item which had not been identified; did you not?

Mr. ARICO. Yes, sir.

Mr. HOLIFIELD. And so it is your argument then that because you had the same chemical you could supply the troops in the field, which is completely irrelevant to the line of questioning which we are endeavoring to propound, which is to find out if you had finished the identification of the cataloging program; do you follow me?

Mr. ARICO. Yes, sir; I do.

Mr. HOLIFIELD. I think your argument is irrelevant to what we are trying to establish, which is the question that counsel asked you. Did not this indicate that you had not done your job of identification thoroughly or the agency owning that 55-gallon drum had not done its identification job thoroughly?

Colonel KOERNER. Sir, I would like to make some statements here, if I may.

Mr. HOLIFIELD. If I am confused now, I would like to be cleared on that. You get my line of questioning; don't you?

Colonel KOERNER. Yes, sir.

Mr. HOLIFIELD. Because we have had information given us that a great deal of this identification was done on a crash basis right at the last and it has to be done over, particularly by the Army.

Colonel KOERNER. Sir, I would like to make this statement first: The identification phase of the cataloging program was completed as of the date we stated. I would like to reassure you on that.

Mr. HOLIFIELD. Was each one of those identifications followed through the full process of identification?

Colonel KOERNER. Yes, sir; they went through the full process of identification, to the best knowledge and information available at the time.

Mr. HOLIFIELD. Why wasn't the 55-gallon drum identified as a separate item?

Colonel KOERNER. If the standard size of container of a material had before been a 5-gallon jug, that would be in the item description for that item, and identified as such. If a decision was made that better service could be made to the troops based on a 25-gallon barrel and thereafter the stockage would be on that basis, then it would require a change in the item description to indicate to the people in the supply system that the equipment was now packed in a different-sized standard container.

By the same token, if before a stock-numbered part was singly packaged and then a decision is made that for economy of operation, storage and shipment, and all that sort of thing it is better to have the unit packed five in a container, then that requires a change in the identification of the item.

Mr. HOLIFIELD. Am I to understand then what you are referring to here in this case is a change of procedure in procurement which has brought in a new item which necessitates the phasing out of the old item or maybe the retaining of the old item and the new item: is that what you are saying?

Colonel KOERNER. That is right, you would phase out the old item and have the new item with the new standard size and new standard package.

Mr. HOLIFIELD. Now, I got from the testimony the fact that when the owning agency transferred this material over to your department that then you found items which had not been identified. That was the impression that I had from the testimony, and not that there had been a change in your procurement in the size of the item.

Colonel KOERNER. Well, I cannot say positively that it wouldn't be possible in the back corners of a depot or supply establishment to find a few isolated examples of something which might not have been originally identified.

Mr. HOLIFIELD. I think it would be normal to concede that.

Colonel KOERNER. But those items which were not identified under the original program that we indicated 100 percent completion for, were very rare isolated cases, sir. I can assure you of that. I can also assure you that the amount of rework that we will have to do solely because of rush to meet a completion date will be a very minor amount rather than any substantial quantitative amount of work.

Now, it might be interesting for the committee to know that in calendar year 1956, 143,896 new items came into the system, but the number of items removed because they were found to be duplicates or because of standardization made on another type of item resulted in only a net increase of 7,159 items in the system. So that that would indicate that approximately 136,000 items had been removed from the system by proper identification, standardization, and so forth.

Mr. HOLIFIELD. Or obsolescence?

Colonel KOERNER. Obsolescence might be another and disposal through surplus procedures. So that that would give you an idea of the number of new things coming into the system which would reflect upon the amount of cataloging activity to be accomplished.

Mr. HOLIFIELD. Well, I think the committee is aware of the fact that if you are going to keep this catalog as a useful tool that you are going to have a terrific job of maintenance, or phasing out and phasing in.

Colonel KOERNER. That is right, sir.

Mr. ROBACK. The theory of the catalog, Mr. Chairman, is somewhat contrary to the testimony; that is, once you had the items cataloged you are not supposed to change the catalog to adjust to different-sized containers. You are supposed to eliminate the different sizes because once the catalog is there you are supposed to stick to it. That is the theory. That is the law.

Colonel KOERNER. The change in the size of the container would not require a change in all of the supply manuals and catalogs in which the number appears. It would require a change only in the description and in the one manual which contains a copy of that description. The others in which it is listed as supply would not necessarily have to be changed.

Mr. HOLIFIELD. Well, unless there was some method of changing it, why you would be forced to keep your obsolete items.

Colonel KOERNER. That is right. The system of production of a stock catalog enabled changes to be made in a fairly easy manner. It is maintained on lines of typed material inserted in a rack. Photographs are made of those and the pages of the various manuals are printed from those photographs, and in order to make changes, additions and that sort of thing, new strips can be inserted in the proper page and the page rephotographed and then reissued.

Mr. HOLIFIELD. I noticed in this particular contract referred to that it had the card item at the bottom of it. Does that indicate the transfer to the IBM cards of this material, or am I wrong in that?

Colonel KOERNER. No, those are the standard stock description cards.

Mr. HOLIFIELD. Well, now, will they be eventually absorbed into the IBM system?

Colonel KOERNER. I would like to have somebody from the DOD cataloging system answer that question. I believe Mr. Ritter is here, sir.

I believe the committe has met Mr. Ritter before.

Mr. RITTER. I am George Ritter. I am Staff Director for Cataloging in the Office of the Assistant Secretary of Defense for Supply and Logistics.

With regard to the inclusion of those items on IBM cards, all items presently in the supply system are now recorded on IBM cards as to stock numbers, the actual owning service, be it the Chemical Corps or any other supply system in the Department of Defense, along with any manufacturer's parts number or specifications which relate to those numbers. So for each item submitted by the Chemical Corps, or any other activity, IBM cards are also submitted to the central organization for those items.

Mr. HOLIFIELD. Now, are those cards complete in their description or do they refer to a book or description?

Mr. RITTER. The descriptive type of an item such as the Chemical Corps normally stocks those items, those cards will contain mainly the reference to that identification with any numbers or specifications, but it will not contain the complete description. The description for that kind of an item is written out.

Mr. HOLIFIELD. So this card is necessary to provide a more complete description than your IBM card?

Mr. RITTER. Yes, sir; all descriptive type items, all which require words to describe them, are published on 8 by 5 cards with the complete descriptive data

Mr. HOLIFIELD. So when you phase out an old descriptive card on an old item, there is an old IBM card that refers to it. You have to reproduce every phase of that into the new system.

Mr. RITTER. In phasing it out actually I am not sure.

Mr. HOLIFIELD. I mean in the case of a substitution of an item. Let us say—if a certain chemical is substituted for an existing catalog item and the old chemical is phased out, you would have to change the whole system on that.

Mr. RITTER. That would depend upon other owners of that item. If we had recorded centrally that some other supply system owned the one which Chemical Corps was phasing out, then it couldn't be phased out of the entire system. Only Chemical Corps ownership would be dropped from that record.

Mr. HOLIFIELD. I see.

Mr. ECKHART. I would like to inquire as to whether or not this gentleman would like to add anything to what you have already stated.

Mr. ARICO. Do you have a specific thought in mind in asking me that?

Mr. ECKHART. Let me ask you this question: Do you feel that the testimony given by Colonel Koerner was at variance with what you intended to convey to the committee?

Mr. ARICO. Well, I think in all fairness to the Colonel and to myself and the committee, Colonel Koerner was talking of another Department of the Army program, the repackaging program, and I was speaking of the transfer of logistic responsibility program. Therefore it may appear as though our statements were at odds with each other.

Mr. ECKHART. No further questions.

Mrs. GRIFFITHS. Before you let them go, may I ask a question? Is this supposed to be a true copy of this contract, do you know?

Colonel KOERNER. Which one do you mean?

Mrs. GRIFFITHS. The Detroit Engineering contract. The question I have is it shows here an amount of $215,425, and as a matter of fact

in the body of the contract the amount is for $395,850, plus a fixed fee of $35,000.

Mr. BRUCE. If you go to paragraph (c) you will find the contract is a 2-year contract. However, the funds are only available for 1 year.

Mrs. GRIFFITHS. This shows how much is available for each year.

Mr. HOLIFIELD. If there are no further questions from the members, we will excuse the Army witnesses now and ask the Navy witnesses to come forward. Thank you very much, Colonel Koerner and your associates.

Commander, will you identify yourself at this time and your position to the reporter, so we can have that?

STATEMENT OF COMDR. W. T. GREENHALGH, ASSISTANT CHIEF, OFFICE OF NAVAL MATERIAL, AND DIRECTOR OF SUPPLY PROGRAM; ACCOMPANIED BY COMDR. H. E. STIRLING, HEAD OF STANDARDIZATION BRANCH; JOHN S. MILLER, STANDARDIZATION BRANCH; LAWRENCE SHAY, CATALOGING BRANCH; R. W. RIGHTER, HEAD OF PRODUCTION EQUIPMENT CONTROL BRANCH OF PRODUCTION DIVISION; LAWRENCE CHERMAK, OFFICE OF NAVY COMPTROLLER; F. A. BENNETT, BUREAU OF YARDS AND DOCKS; LOUIS SCHLESINGER, BUREAU OF ORDNANCE; AND PAUL BURK, BUREAU OF ORDNANCE

Commander GREENHALGH. Very well, sir.

Mr. Chairman, members of the committee, I am Comdr. W. T. Greenhalgh, Assistant Chief of the Office of Naval Material and Director of Supply Programs.

This presentation has been prepared in support of the prior delineation of the defense standardization program as seen through the eyes of the responsible authorities of the Department of Defense. It was reassuring to our departmental representatives that this program is realistically pictured as a pioneering effort. As we extend our operations and lead away from the "old phase" of the program into the so-called "new phase," whereunder responsibility has been decentralized to the departments, we enter more or less virgin territory. In fact we have few precedents to guide us. The general statement to follow, regarding the nature and extent of Navy participation in the program, will touch upon the complexity of the "new phase," while discussing the history and the progress made in the program to date and our plans for the future.

The basic policies and procedures for the conduct of the defense standardization were crystallized in the Department of Defense directive of October 15, 1954, following enactment of the Cataloging and Standardization Act of 1952. The basic principle for the conduct of the program as announced by this directive was the decentralization to the military departments by assignments of portions of the program on the basis of Federal supply classification (FSC) classes. It was early apparent that with this decentralization or responsibility, a substantial buildup of departmental management organizations must follow. For the 7 years ending with calendar year 1955, Navy activities conducted work on specifications and standards at a constant level.

This we have called the "maintenance level," or that level of effort which satisfies the need generated in day-to-day operations of design, development, and procurement.

A total of approximately 500 FSC classes has now been assigned to the military departments for standardization. The Navy has been assigned 183 FSC classes, approximately 1,200,000 items. The Chief of Naval Material has been assigned the responsibility for development, implementation, and management of the Navy's portion of the program. Within the Office of Naval Material the Standardization and Packaging Branch of the Supply Programs Division has been designated as the Navy Departmental Standardization Office with the head of the branch, who is Commander Stirling on my left, serving as the Navy adviser to the Staff Director for Standardization. The responsibility for performing the standardization within each of the classes has been assigned to the technical bureaus on the basis of technical competence, mission, and supply interest. Each technical bureau has designated a central unit to act as a point of contact for standardization.

For the most part, the bureaus have retained administrative responsibility at the departmental level for the classes assigned, but every effort is made to bring into the standardization program all available talent. This means that specific standardization work assignments are spread to Navy activities from coast to coast.

At the present time the standardization efforts of the Department of the Navy are directed toward completion of the individual project assignments carried forward from the "old phase" of the program, and the activation and submission of detailed plans for FSC classes under the "new phase." The latter includes all projects scheduled under each class in the new phase.

The Navy is on schedule thus far in fiscal year 1957, in its work under the "old phase" of the standardization programs. Because of the stimulus which "new phase" studies have given standardization work, there has been an actual increase in the amount of work required under the "old phase," in other words under the classes not as yet activated. This resulted in the Navy being responsible for 992 active projects for coordinated documents as of December 31, 1956. The Navy is not on schedule in completing coordination of the detailed plans called for the "new phase" of the program. Of the several delaying factors, the greatest handicaps were brought about by the delay in furnishing budgetary support and the inability to recruit personnel, after increased ceiling authoriaztion was granted in the second quarter of fiscal year 1957. The delay in furnishing budgetary support was brought about, of course, by the fact that the departments received their fiscal year 1957 program schedule in June 1956, too late to coincide with the regular budget cycle.

For the fiscal year 1957 the Assistant Secretary of Defense (Comptroller) directed the reallocation of funds allowed the Navy for other purposes to meet the estimated need in reaching the standardized program targets. The Assistant Secretary of the Navy (Material) directed the acceleration of the program to coincide with the program targets and supported negotiations for an increase in personnel ceilings, both within the bureaus and at field activities. It was not, however, until the beginning of the second quarter of fiscal year 1957 that these staff increases were authorized.

Technical personnel to fill these billets have been difficult to obtain. One device which the Navy is employing to remedy the shortage of qualified engineering personnel is to use equipment specialists as widely as possible in this work and to rely on engineering skills at time of final review and evaluation.

Despite the handicapping effect of slow recruitment of personnel, a total of 37 letters of activation scheduled for issuance in the first half of fiscal year 1957 under the "new phase" have all been issued on schedule. Eight detailed plans were scheduled for submittal in the first half of fiscal year 1957. However, only one was submitted on schedule. Work is proceeding but experience shows that it is impossible to win back in the process of coordination the time once abandoned in late initiation of the coordination phase. Percentagewise, the record indicates some slippage; however, strenuous efforts are being made to submit the scheduled number of detailed plans required for fiscal year 1957. Accordingly, the Navy expects to improve its record by the end of fiscal year 1957, although it is entirely possible that every target date may not be met.

Now, I would like to add that we have been given 27 detailed plans to accomplish by the end of 1957. Four have already been submitted to DOD for their approval. Nineteen are completed as far as the planning is concerned and the detailed plans are in the coordination stage now of the other services. Only four remain in the preparation stage. So looking at it in this light, it appears as though we will almost, if not completely, be able to meet the schedule at the end of the fiscal year.

Budget estimates had been submitted for fiscal year 1958, prior to receipt of the fiscal year 1958 program schedule, but in subsequent reclamas the program has been fully supported. It is believed that any rescheduling for fiscal year 1958 will be brought about by factors other than lack of funds.

The organization of this large and complex program is now making some headway.

For the first time the governing program and procedure have been directed without substantial change at the same target for more than 2 years. It is recommended that this program be allowed time to carry through to its objective. Each procedural change resulted in a serious loss of momentum, until each new and revised program could assume form and substance.

Mr. ROBACK. Whom is that directed toward? Is that statement directed toward the Department of Defense?

Commander GREENHALGH. It is directed to all of us. I think everyone would like to have time to go on with this program now that we have something concrete in the way of planning. We are making progress in it without constant changes. The statement is not intended to be critical of anyone, Mr. Roback. It is a case of our making a plea for the continuation of the program which, I believe, the committee desires as well.

Mr. ROBACK. Does it imply there have been too many changes in procedure?

Commander GREENHALGH. We were definitely implying that prior to the passage of this law there had been too many.

It is axiomatic that the departments are responsible for equipping and operating the forces necessary to accomplish their assigned missions. We have to keep this responsibility ever in mind while at the same time providing for effective policing of standardization practices and related operations of the supply system. The many procedural safeguards we have incorporated in the standardization coordinating process do tend to stretch out interdepartmental operation over several months. We will always be seeking a means of shortening the process of coordination, for it is an inherent problem.

Basic policy for the defense standardization program has been enunciated. A certain amount of procedure has been firmly established, in sufficient detail at least, to show the form and structure of the basic effort. A substantial amount of detail still remains to be worked out, to provide adequate guidance for all who are engaged in the program. The completion of these procedural details will speed the program. To this end the Navy is committed to share in expediting the issuance of the procedural manuals still outstanding.

As we look to the future of this program within the Navy, we have three major areas which require our earnest consideration. First, staffing and funding for the principal effort; secondly, training of newcomers to the program so as to make them fully effective and further educating and training potential users of standards in related supply management fields; and finally the development of monitoring and review procedures whereby it can be determined that optimum benefits are being extracted from the standardization which has been accomplished.

The foregoing remarks have been aimed at giving a general picture of the status of the defense standardization program within the Department of the Navy at this time. The Navy is firmly committed to the aims and principles of this program, and I have mentioned obstacles only to point out that our maximum effort will be directed toward their elimination and the subsequent acceleration of the program.

I want to thank you for this opportunity to set into perspective, alongside the programs of our sister services, the Navy's participation in the defense standardization program.

No doubt some questions on specific facets of the program will have occurred to the committee. My associates and I shall be pleased to undertake to answer your questions now or later at the committee's pleasure.

Now, I have brought with me, Mr. Chairman and members of the committee, Comdr. Harry Stirling, who is head of the Standardization Branch and represents the Navy with DOD.

Mr. John Miller, of the Standardization Branch.

Mr. Lawrence Shay, of our Cataloging Branch.

Mr. R. W. Righter, Head of Production Equipment Control Branch of Production Division.

Mr. Lawrence Chermak, of the Navy Comptroller's Office.

F. A. Bennett, of the Bureau of Yards and Docks.

Louis Schlesinger, of the Bureau of Ordnance.

Mr. Paul Burk, of the Bureau of Ordnance.

These men have been requested to come in line with some of the questions which were apparent from your staff.

Mr. HOLIFIELD. Thank you, Commander.

Are there any questions from the members at this time? If not, why, I will ask Mr. Eckhart to take over the questioning on some of the points.

Mr. ECKHART. On page 3 of your statement, Commander, you talk about the delay in furnishing budgetary support because of the late receipt of the fiscal year 1957 program. Has this occurred in the past?

Commander GREENHALGH. That occurred in the 1957 program. The statement you refer to concerns the 1957 program wherein the reallocation of funds were directed by the Assistant Secretary of Defense. Because the budget had been formalized it was necessary for us to go back and reallocate funds for standardization which we were given for other purposes. Permission to do this came from the Secretary of Defense (Comptroller).

Mr. ECKHART. Did that not also occur in connection with the 1955 program?

Mr. MILLER. The situation, sir, is that at no time did we increase our actual allocations of funds prior to 1957. It is true that we didn't get any particular program guidance prior to that time. It wasn't as definitive as the 1957 program.

Mr. ECKHART. Is it true that you received your 1956 schedule 2 months into fiscal year 1956?

Mr. MILLER. That is true; yes, sir.

Mr. ECKHART. So this is actually the second time that the Department of Defense has been negligent in getting this schedule to you so that you can properly plan for it?

Mr. MILLER. Those are your terms, sir. There was a delay; yes.

Mr. ECKHART. Who is responsible for the preparation of these schedules and the subsequent transmission to the military departments?

Mr. MILLER. At the current time, sir, the program and scheduling committee carries this out. We feel that that has been a great advance over the period when the individual project officers in the DOD came up with proposals for what would be a year's work, and those were all lumped together without regard to the available talent, moneys or material and called a program.

Mr. ECKHART. Who officially transmits the Department of Defense schedule to the military departments?

Mr. MILLER. The last three annual programs were signed out in each case, I believe, by either the Assistant Secretary of Defense Supply and Logistics or his Deputy. Prior to that time I believe we got one signed out by the Director for Cataloging and Standardization and Inspection.

Mr. ECKHART. Is it not true that Navy personnel were working under a handicap particularly in respect to the 1957 program when you get it at the beginning of the fiscal year?

Mr. MILLER. That is unquestionably true, sir, because we haven't had time to fund or to staff for it, but at the same time we were grateful even to have a firm program because we have been developing slowly. This has been an advance, as you point out yourself. This came in June, whereas the prior one come in October.

Mr. ECKHART. Well, we are making a little progress.

Mr. MILLER. Yes, sir.

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Mr. ECKHART. But does not this compound the difficulties that you are faced with?

Mr. MILLER. Definitely, sir.

Mr. ECKHART. Throughout the program by getting late schedules?

Mr. MILLER. Yes. So that for the fiscal year 1959 program, for which we have already submitted some preliminary estimates, we do have much more to go on than ever before, and we will have that in time for our submissions in July.

Mr. ECKHART. So that in spite of the lethargy on the part of some officials in the Department of Defense the military services are doing their best to comply with the established schedules?

Mr. MILLER. Again, I wouldn't wish to imply any criticism of a situation which has been a bit beyond the power of any one individual to remedy. The situation does exist certainly, just exactly as you described it.

Mr. ECKHART. We will allow the statement here in your prepared statement to stand.

Mr. ROBACK. Is the bottleneck in the Navy Comptroller's Office or higher up?

Mr. MILLER. There has been no bottleneck within the Navy, sir. The existing system merely provides that the program must be established and justified in accordance with a certain time schedule. At no time until fiscal year 1959, now approaching, has the program been established in time enough to go to the Comptroller in the normal course of events.

Mr. HOLIFIELD. In other words, you have an operating program now that you can actually use as a yardstick to make your budgetary requests; is that right?

Mr. MILLER. Precisely.

Mr. HOLIFIELD. Whereas heretofore you did not have. Although you had a program, you did not have a functioning operation; did you?

Mr. MILLER. Let me say instead of answering directly, sir, just a "yes" or "no," let me explain it. In 1956 there was a program of sorts. There was guidance of a sort, but that guidance was not coordinated.

Mr. HOLIFIELD. There was no operation?

Mr. MILLER. That is right.

Mr. HOLIFIELD. In other words, this was in the conference stage at that time, in more or less the conference stage at that time?

Mr. MILLER. Well, the——

Mr. HOLIFIELD. You were formulating the program.

Mr. MILLER. The departments had no voice in formulating that program, let me say that, or very limited voice. That was a program established, sent out and there it was.

Mr. HOLIFIELD. It wasn't even in the conference stage on the operating level?

Mr. MILLER. No, sir.

Mr. HOLIFIELD. It was only in the paper stage at the higher level?

Mr. MILLER. Precisely.

Mr. HOLIFIELD. So as soon as they actually gave you something to work with, you started out formulating an operating program?

Mr. MILLER. Yes, sir. The program has been improved year by year, even though the departments didn't participate fully in it until

the creation of this program and scheduling committee, which was established just about a year ago or later than that, some 11 months ago. Its first work showed up in the 1956 program revised and in the 1957 program.

Mr. HOLIFIELD.. Let me try to understand that. Heretofore if there was a desire or need for a program that came up from the agency involved in the way of an individual proposal, I suppose, to the Secretary of the Navy or his staff.

Mr. MILLER. To be more specific, sir, the only staffing and funding which was provided for in our standardization programs as conducted in the past were self-generated, exactly as you described them. As it was very well put here in the earlier testimony, the operation developed along the lines of a business enterprise. If you saw a need for standardization, you nailed that down as a specific project in a specific area, to the extent that we could foresee.

Mr. HOLIFIELD. But that was not servicewide?

Mr. MILLER. It was not coherent or cohesive. That is the point.

Mr. HOLIFIELD. Explain the difference with this new scheduling committee? What is its power and how would you go through the project now?

Mr. MILLER. At the present time we are approaching the whole gamut of physical items in the supply system in the phased program, where we take up the FSC classes in sequence. The idea is twofold. We have to match available resources against what we would like to accomplish. We attempt to segregate high priority items, which in the main are pretty self-evident, where we can make money. We also have to keep available personnel at work. If a man happens to be a specialist in locomotives or rail equipment, there is no reason he should stand idle because that happens to be a low priority item. So with these considerations in mind, we have representatives of the DEPSOS, of all three military departments, meeting with the DOD program managers, who are called in at times, but principally with a planner within the Department of Defense. They meet under his chairmanship and for extended periods, let me say. They take into consideration the program managers' recommendations for priorities, all the analyses, bureau, service and command recommendations for priorities, analysis of available manpower, and also the hiring difficulties that are encountered. The mere existence of a ceiling doesn't guarantee any muscle when it comes to moving a great job. All of these considerations are hashed back and forth.

A tremendous effort is made to see that there is not overlap and duplication of effort within any particular bureau or service. As in the case of the Bureau of Ships, in the Department of the Navy, to cite an example, since they have approximately 60 percent of the Navy assigned classes, the Bureau of Ships could very well get a slug of work in there in, say, the electronics area, which would require the devotion of an inordinate amount of manpower, for which we just couldn't spare our people.

Mr. HOLIFIELD. In other words, this is really an evaluating and screening board to set up programs and assign them priorities and this, as I understand it, did not exist before in a formalized way.

Mr. MILLER. It was created with the concurrence of the departments last spring and has been formalized in the recent past by a DOD directive, but it actually operated 11 months ago.

Mr. HOLIFIELD. In your opinion it is actually operating in a much more expeditious manner than the previous method?

Mr. MILLER. We are very grateful for it; yes.

Mr. ROBACK. Wasn't that committee formed because the program had practically broken down?

Mr. MILLER. Yes, sir. It was recognized by all concerned that this had to be a coordinated effort. It does no good to establish goals without there being realistic thinking.

Mr. ECKHART. In the areas where insufficient funds have been available, can you name and cite any example where funds have been reprogramed into standardization work from any other project?

Commander GREENHALGH. I think Mr. Chermak could answer that.

Mr. CHERMAK. I wasn't prepared to answer questions on the particulars of reprograming. My request to be up here related primarily to the method of reprograming rather than how the moneys shift. I know of no instance of reprograming that related itself specifically to standardization. In all probability the reprograming was not done at a level required to be done for the purpose of reallocation of moneys. It was taken out of project heads. Now, instances of reprograming may be available to the Commander where this occurred, but it doesn't necessarily follow. Because when money is needed for standardization in a large subhead as under BuShips, that we have to look elsewhere other than within that particular subhead. BuShips itself could reprogram within its own program any moneys needed for standardization.

Mr. ECKHART. In other words, it is not possible to determine if the Department of the Navy with all of its bureaus requires $6 million and only $3 million are available to determine whether or not any portion of that remaining $3 million has been reprogramed for standardization work?

Commander GREENHALGH. May I try to clarify that, Mr. Eckhart? In fiscal year 1958, which is the year we are facing, the Navy overall, I believe, has asked for much more money for standardization than they have ever had before. Now, that is consistant with the acceleration of the program. You must remember that the moneys earmarked or set up tentatively for budgetary purposes are not actually all of the funds that will be spent on standardization. Salaries at the departmental level may or may not be charged to standardization funds for a great deal of the work involved. For the most part of bureaus retained administrative responsibility at the department level for the classes assigned. That means a great deal of the work will be done in the bureaus themselves, right here in Washington, and that may or may not be charged to standardization program funds.

In addition, one of our largest areas lies in simplification, which has to do primarily with the elimination of items from the FSC classes. This is being done at the present time at the SDCP level, or our inventory control level, and there again it may or may not be charged to standardization funds. It is a function of the inventory control and is ofttimes paid for within that category.

Mr. ECKHART. Are you not representing the Office of Naval Material here this morning, Commander?

Commander GREENHALGH. Yes; however, I am trying to explain to you why more funds will be expended on standardization than might be apparent at the present time.

Mr. ECKHART. I would like to have you explain to the committee a statement contained in a letter signed by the Acting Chief of Naval Material, R. L. Swart, dated March 29, 1956:

> Based upon the information previously furnished and the level of support required and indicated in enclosures (1) through (5), inclusive, the addressees are requested to reprogram available resources. Such reprograming may fail to provide resources adequate to bring their assigned portions of the defense standardization program (including participating and collaborative functions) on schedule by July 1957. In such case, the addressees are requested to provide to this Office a statement of funds and personnel required to accomplish the schedule established by the Secretary of Defense.

In the light of the fact that there has been repeated requests from the Chief of Naval Material and the Assistant Secretary of the Navy for Material to reprogram the resources to comply with the existing Department of Defense schedules, we are trying to determine whether or not any signs of that have occurred within any of the Navy bureaus, and if so, to what extent.

Commander GREENHALGH. We did reprogram for fiscal year 1957. The Assistant Secretary of Defense Comptroller directed the reallocation of funds allowed the Navy for other purposes to meet the estimated need in reaching the standardization program targets for 1957.

Now that, I believe, is a specific instance of reallocation of funds for other purposes, but which were used for standardization.

Mr. CHERMAK. Perhaps if I give an exposition of the Navy structure and the extent to which the Comptroller participates in the reallocation, it will eliminate the difficulty of picking out particular moneys at different levels that may flow to standardization.

The Navy's structure, when justified before the Appropriations Committees, consists of about 22 appropriations. These appropriations are broken down into budget activities and justification is made of money amounts for budget activities. These budget activities may be large amounts. There may be $200 million, $300 million, or $400 million in a budget activity in a structure like the Office of the Secretary, of which O. & M. is a part. Or, again, the amounts may be relatively small. They may be a million or $5 million. If there is a need to reallocate money in the Bureau of Ships, a setup where there is $200 million in the pot, BuShips would not have to go above that budget activity to the Comptroller level for the purpose of distributing its money. So that requirement would not reflect itself at the Comproller level. If, however, there would be a need to reallocate money in the O. & M. structure, for instance, where the money amounts set in budget activities are a million dollars, or even less, in that area it would be necessary to go up through the Comptroller's Office for the Comptroller to reallocate.

If the percentage of that reallocation exceeded 5 percent, in that case we would go up to the level of the Department of Defense in the Comptroller's Office, get his approval, and also clear with the Appropriations Committees as to the shift in that budget activity.

Mr. ECKHART. Can your office determine the projects to which its standardization funds can be applied?

Mr. CHERMAK. Are you asking me in terms of our administrative controls or in terms of legality what could they be?

Mr. ECKHART. I am talking more in terms of legal and fiscal controls rather than administrative.

Mr. CHERMAK. Within the procurement appropriations we could shift any moneys toward standardization legally necessary to the procurement of the end item. Our justifications before Congress are not legally binding upon us. We can shift within any of those justifications to a purpose which is set forth in the appropriation act, if we live within the language contained in the appropriation act.

As a matter of practice, though, we do not vary from the justifications we make to a greater degree than 5 percent of that justification, if the amount is under $200 million. If the amount of the budget activity justification is more than $200 million every $10 million variation we rejustify before the committee. Or, if we know there is a special interest in the committee, then we have no amount of guidance as to our going back to the committee and rejustifying that particular money. But within the total sum given in the appropriation, that sum is available for any of the purposes stated in the appropriation and there is no limitation legally on the application of that money to the end purpose that we seek. Since standardization is a function of procurement, it would be available theoretically. Although it would defeat our procurement end, all of our moneys could be made available for standardization.

Mr. ECKHART. There are some other questions I have here, but at this point I think it might be appropriate if we could ask Commander Greenhalgh if they could respond to the statement contained in the chairman's opening statement.

Mr. HOLIFIELD. Yes, I would like to hear from you in regard to Admiral Clark's statement.

Commander GREENHALGH. Sir, this is entirely new to me. I wasn't forewarned that this would be introduced. However, I would like to say this, that we have not at any time taken the emphasis off of the development of specifications for new items coming into the system from procurement. I think that we have tried to convey that thought all through this hearing. The old phase has been continued and we have had an increased workload of projects which were similar to those pursued solely under the old phase. That is true even though the class has not been activated. I don't think there was ever any intention of cutting down on this type work. I think you will find that in the testimony of Department of Defense representatives that they assured the committee that we would continue to give urgent treatment to the development of specifications, whether or not the class had been activated, which were required for new procurement.

Now, I don't know what prompted the admiral's statement and I can't answer it, sir. All I can say is that there is no attempt as far as we know to cut back on developing specifications for new procurement. They will have to go along and the program will have to be developed in that light.

Mr. ECKHART. On the 28th of November 1955 the Office of Naval Material sent a memorandum to the Assistant Secretary of Defense for Supply, subject, "Assignment of FSC Classes for Standardization."

I understand that these classes here are 1336, 1410, 1420, 1430, 1440, 1450, 5820, 5821, 5825, 5826, and 5830, all involving guided missiles.

Now, could you give us a report on the status of the work under these particular FSC classes?

I might indicate that the first paragraph of this memorandum states:

The Department of the Navy accepts without reservation the assignments of standardization responsibility for Federal supply classification (FSC) classes as proposed in reference (a).

It is planned that the Navy assignments in the guided missiles area, except class 1336, will be delegated to the Bureau of Aeronautics with full cooperation of the Bureau of Ordnance and other bureaus and the Marine Corps as their interests and capabilities warrant. Class 1336 is to be delegated to the Bureau of Ordnance on that basis. Similarly, classes 5830 and 5831 are to be delegated to the Bureau of Ships and to the Bureau of Aeronautics, respectively.

The assignments of standardization responsibility in the guided missiles area to the Department of the Navy are considered particularly appropriate in that:

(*a*) The Navy, together with the Marine Corps has the complete range of requirements and experience (land, sea and air) in surface-to-surface, surface-to-air, air-to-air and air-to-ground missiles.

(*b*) The Navy now has four modern operational missiles (Sparrow I, Regulus I, Terrier, Petrel).

(*c*) The Navy organization for standardization provides for optimum coordination with the aircraft and ordnance industries, and with interested services and commands in the Army and Air Force.

Further, the Bureau of Aeronautics is in a very favorable position in this respect, inasmuch as they have been assigned standardization responsibility for relatively few FSC classes.

Now, this was in November of 1955, and I would like if you can, Commander, to have you relate this to Admiral Clark's statement.

Commander GREENHALGH. Perhaps Mr. Miller can tell you what prompted that letter and also when that class is to be activated and the work schedule to be produced under it.

Mr. MILLER. You have hit, sir, on one weakness of the presentations to date, and that is that they have not made clear that not all of the FSC's are yet assigned. There are five hundred and thirty-some-odd FSC's. There are 496 of them, I believe, assigned and only 6 classes that are presumed to have no standardization potential, in this particular area of the guided missile, the assignment has not yet been made to one department. It is still centralized within the Department of Defense because there are three claimants. That letter which you read was our advertising brochure as to why the Navy itself should have been given this responsibility. We were keen for it. In the area of things that fly, the Air Force obviously took over most classes. So that the Bureau of Aeronautics, particularly, was a strong contender to go into this area and do a job.

Mr. HOLIFIELD. And the result of that is that on February 25 of this year Admiral Clark said that the missile programs have failed completely in the area of dollar cost. Unit costs have risen even after the missiles have been placed in mass production and this has never happened before. Part of the blame, Clark said, was the military's outdated specifications and standards, delays in decisions, insistance upon changes conspired to increase the cost.

Mr. MILLER. I can answer some of those things merely in a generalized way, because they are stated as generalizations, sir. I wouldn't condemn the entire standardization program because of the statement that we have some outdated specifications.

Mr. HOLIFIELD. We are getting down to the missile program.

Mr. MILLER. You appreciate there are a lot of specifications and standards that go into the production of a satisfactory guided missile. Many, taken separately, wouldn't apparently relate to anything that

flies. Therefore the generalized statement that we do have a lot of outmoded specifications is true. We will agree that, of course, we do have to refurbish our specifications periodically or else they do get out of date. The principal weakness, I would think, in trying to ascribe any failure of this nature to the standardization program is the fact that, No. 1, the guided missile is so highly specialized that the people who work on it are independent operators in the main. The blame, if any attaches to the standardization program, is in our failure to have conducted an educational campaign out in the contractor's drawing rooms where these guided missiles are largely developed. They are developed under contract, and that is possibly where we have some gain to make.

Mr. HOLIFIELD. Wasn't K. T. Keller a few years back appointed as what you might call the czar of the missile program?

Mr. MILLER. I am not acquainted with his having that job.

Mr. HOLIFIELD. To try to bring some order into this field, some direction.

Mr. MILLER. Of course, there are so many facets, sir, not to interrupt you, but the responsibility for systems as a whole is not even within the standardization program range, you see. We standardize on the components, the bits and pieces. We bring about the most orderly arrangement of the bits and pieces that we can. But when you connect these up into the system which comprises the missile and its controls you have a long chain of responsibility.

Mr. ECKHART. Mr. Miller, you indicated this was the pitch of the Navy to try to have the responsibility for the guided missile standardization.

Mr. MILLER. That is true.

Mr. ECKHART. Would you assume that the other two military services made a similar pitch?

Mr. MILLER. We know that is true; yes, sir.

Mr. ECKHART. And as of this date, is it your testimony that it has not been resolved in terms of assignment?

Mr. MILLER. The decision was made that the assignment would not be made at this time, sir. I don't know whether that has been formalized in writing, but it is certainly well known to all of the DEPSO's that there is no current assignment and that no assignment is contemplated in the immediate future.

Mr. HOLIFIELD. This recent apportioning among the services of the specific type of missiles by Secretary Wilson, wasn't that in effect an assignment to the different branches?

Mr. MILLER. That merely governed their research and development, yes. It didn't cover the standardization as such, sir.

Mr. HOLIFIELD. So as far as standardization is concerned in that field it is still spread among—I mean, there is really no effort in any of the three services in that field?

Mr. MILLER. The distinction must be drawn, sir, between the components which make up the missile and which are the proper responsibility of the standardization program and the systems comprising the warhead, missile propulsion, guidance, storage, check out and inspection, dispersal, the thousand and one items which comprise our concern with the whole system. I would be averse to accepting responsibility for anything other than components that go in that missile within our program as it is presently conceived.

Mr. HOLIFIELD. Are we to understand there is some effort on the standardization of components?

Mr. MILLER. I am not acquainted with the details, but to the extent that an intermediate range missile is comparable in any way to another one; yes. There are certainly committee meetings and there are active meetings of technicians in this area, but I am not conversant with the specifics.

Mr. HOLIFIELD. In terms of the completion of standardization work on vacuum tubes, for example, which are used in the guided missiles, that will be standardized when the service that has the assignment gets around to working up the detailed plan and comes up with some standardization. That may be in 1959 or 1960 conceivably.

Mr. MILLER. Actually for the specific class that you mentioned, if I recall correctly, the detailed plan is due, I believe, in 1958. It is due before too long at any rate. Fortunately, in that specific area, we have made tremendous strides in reliability and so forth, so that we are not wholly dependent upon the standardization review incident to the activation of the class.

Mr. ECKHART. In view of this development, Mr. Chairman, would the committee members desire that any further statement be furnished to the committee on this guided missile FSC class responsibility?

Mr. HOLIFIELD. I will have some questions directed to you in a letter in which we will go into this matter further and request some additional information on it. (See appendix, exhibit H.)

Mr. ECKHART. Do I understand there is a representative of the Bureau of Ordnance here, Commander?

Commander GREENHALGH. We have Mr. Schlesinger here and Mr. Burk.

Mr. ECKHART. I would like to state for the record that this file which I hold in my hand is a preliminary draft of the Manual for Workmanship and Design Practices for Electronic Equipment. This was the result of a contract let by the Bureau of Ordnance of the Navy Department to a contractor in the amount of $104,128.

Now, a review of this manual indicates that everything contained in there is of a rather elementary nature, and I would like to find out exactly the use to which a manual of this type is put in the military services or within the Bureau of Ordnance.

Mr. BURK. Mr. Eckhart, maybe if I go back a little bit prior to this, I can better answer your question. In the past in the old specifications we generally had a standard phrase we put in that "the workmanship on the equipment for which the specification is written shall be commensurate with the type and kind of equipment for which the specification was written." For instance, if it was a watch we expect that kind of workmanship. For instance, if it is structural work it gets a structural type of workmanship.

This leads to a misinterpretation, various interpretations by different people according to their past experience. It leads to differences of opinion of inspectors and contractors as to what is good workmanship. This has resulted in material being accepted by the Government in which the workmanship was not sufficiently good to stand up in service.

Mr. Schlesinger has here a rather lengthy report on one piece of equipment that brings that out. While the equipment was accepted

and considered satisfactory, neither the manufacturer or the inspector had any guide to judge what good workmanship was. That led on into this contractor attempting to develop standards of workmanship so that both the manufacturer and the inspector could better judge what actually was good workmanship. In just a little thing, like you say, that is elementary, a little thing like attaching a wire to a terminal in a piece of equipment that goes aboard ship, it is most important that that wire be attached correctly and not depend upon the solder to make the mechanical connection. In the soldering you may get what is known as a "rosin joint," apparently a well-made joint, but electrically and mechanically it is not good.

Mr. ECKHART. In connection with the study there are some statements in here, as you have just indicated, that where a wire is to be attached to a terminal it shall be attached rigidly and firmly. I wonder if those statements aren't self-evident to contractors or people working with the equipment.

Mr. BURK. It has not been, because what is "rigid and firmly" to one man is interpreted differently by another man, according to his past experience in the type and kind of equipment he has been dealing with.

Mr. ECKHART. I wonder if I could ask you, sir, to just read into the record the short paragraph on standardization.

Mr. BURK. This is paragraph 6.1.1 (reading):

> Standardization. To establish minimum performance requirements for Federal JAN, MIL, and other Government specifications for parts issued. These parts and procedures are required by specifications. The use of nonapproved parts where necessary must be cleared with the contracting agency. A qualified products list which lists qualified manufacturers and parts is of assistance in the selection of parts.

Mr. ECKHART. That is enough right there.

What is your interpretation? What do you think the contractor would interpret from those last two things? Does it exhort him to use only standard parts or does it indicate that there is an exception there that he can request and get approval for deviation?

Mr. BURK. He can request and get approval for deviations provided the standard part will not give the performance that is required of the equipment he has designed.

Mr. ECKHART. You feel that the information contained in that paragraph, for example, is something that should be associated with the standardization program?

Mr. BURK. Yes, sir; because we set up qualified parts and standards. Deviations from these standards should be approved by someone engaged in the standardization program.

Mr. ECKHART. I just wanted to get the testimony from someone who was familiar with that.

Mr. HOLIFIELD. Off the record.

(Discussion off the record.)

Mr. HOLIFIELD. The subcommittee will be adjourned.

(Whereupon at 12:15 p. m., the subcommittee adjourned.)

APPENDIXES

EXHIBIT A

THE DEFENSE STANDARDIZATION PROGRAM

A Directory of FSC Class Assignments to the Military Departments

30 JULY 1956

OFFICE OF THE ASSISTANT SECRETARY
OF DEFENSE
(Supply and Logistics)
WASHINGTON 25, D. C.

INTRODUCTION

The Defense Standardization Program was established in pursuance to the Defense Cataloging and Standardization Act (Public Law 436 - 82nd Congress) and is implemented by Department of Defense Directive 4120.3, dated 15 October 1954. In order to achieve the objectives of the program, the Office of the Assistant Secretary of Defense (Supply and Logistics) has assigned to the military departments responsibility for portions of the program by classes in the Federal Supply Classification system. This publication is a compilation of such standardization assignments to the military departments indicating the number and title of each commodity class assigned and the military organization with either assignee or collateral responsibility.

Basic policies and prescribed procedures for implementation of the Defense Standardization Program are contained in a document entitled, "Military Manual for Standardization - M 201". This publication may be obtained through the Superintendent of Documents.

KEY TO ABBREVIATIONS

The abbreviations shown below are used throughout this directory to designate the Army services, Navy bureaus and Air Force commands responsible for each of the FSC classes.

Army

CmlC- Chemical Corps
CE - Corps of Engineers
Med - Army Medical Service
Ord - Ordnance Corps
QMC - Quartermaster Corps
SigC- Signal Corps
TC - Transportation Corps

Navy

Aer - Bureau of Aeronautics
MC - Marine Corps
BuMed- Bureau of Medicine & Surgery
NOrd - Bureau of Ordnance
Pers - Bureau of Personnel
CG - Coast Guard
Ships- Bureau of Ships
S&A - Bureau of Supplies & Accounts
Docks- Bureau of Yards & Docks

Air Force

HQ AMC - Air Materiel Command
SMAMA - Sacramento Air Materiel Area
SBAMA - San Bernardino Air Materiel Area
MAAMA - Middletown Air Materiel Area
WRAMA - Warner Robins Air Materiel Area
MOAMA - Mobile Air Materiel Area
OOAMA - Ogden Air Materiel Area
SAAMA - San Antonio Air Materiel Area
OCAMA - Oklahoma City Air Materiel Area
TOPEKA - Topeka Air Force Depot
SHELBY - Shelby Air Force Depot
ROME - Rome Air Force Depot
GADSDEN - Gadsden Air Force Depot
MEMPHIS - Memphis Air Force Depot
GENTILE - Gentile Air Force Station
ARDC - Air Research and Development Command
WADC - Wright Air Development Center

NOTE: Technical coordination and engineering responsibility is a function of Headquarters, ARDC performed by WADC.

Other

ASMPA - Armed Services Medical Procurement Agency
NSA - National Security Agency

CONSOLIDATED LIST OF STANDARDIZATION RESPONSIBILITY AMONG THE MILITARY DEPARTMENTS BY ASSIGNEE ACTIVITY AND BY PARTICIPATING ACTIVITY

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
	WEAPONS				
1005	Guns, through 30mm (Subassign aircraft guns to AF)	Army-Ord		NOrd	WRAMA
1010	Guns, over 30mm up to 75mm	Army-Ord		NOrd	WRAMA
1015	Guns, 75mm through 125mm	Army-Ord		NOrd	WRAMA
1020	Guns, over 125mm through 150mm	Navy-NOrd	Ord		WRAMA
1025	Guns, over 150mm through 200mm	Navy-NOrd	Ord		WRAMA
1030	Guns, over 200mm through 300mm	Navy-NOrd	Ord		WRAMA
1035	Guns, over 300mm	Navy-NOrd	Ord		WRAMA
1040	Chemical Weapons and Equipment	Army-CmlC		NOrd	WRAMA
1045	Launchers, Torpedo and Depth Charge	Navy-NOrd	Ord		WRAMA
1055	Launchers, Rocket and Pyrotechnic	Navy-NOrd	Ord		WRAMA
1070	Nets and Booms, Ordnance	Navy-NOrd	TC		WRAMA
1075	Degaussing and Mine Sweeping Equipment	Navy-Ships	TC		WRAMA
1080	Camouflage and Deception Equipment	Army-CE		Ships	WRAMA
1095	Miscellaneous Weapons	Army-Ord		NOrd	WRAMA
	FIRE CONTROL EQUIPMENT				
1210	Fire Control Directors	Navy-NOrd	Ord		WRAMA
1220	Fire Control Computing Sights and Devices (Subassign land-based equipment to Army)	Navy-NOrd	Ord		WRAMA
1230	Fire Control Systems, Complete (Subassign land-based equipment to Army)	Navy-NOrd	Ord		WRAMA
1240	Optical Sighting and Ranging Equipment	Army-Ord		NOrd	WRAMA

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
1250	Fire Control Stabilizing Mechanisms (Subassign land-based equipment to Army)	Navy-NOrd	Ord		WRAMA
1260	Fire Control Designating and Indicating Equipment (Subassign land-based equipment to Army)	Navy-NOrd	Ord		WRAMA
1270	Aircraft Gunnery Fire Control Components	AF-WRAMA	Ord	NOrd	
1280	Aircraft Bombing Fire Control Components	AF-WRAMA	Ord	NOrd	
1290	Miscellaneous Fire Control Equipment	Army-Ord		NOrd	WRAMA
	AMMUNITION AND EXPLOSIVES				
1305	Ammunition, through 30mm	Army-Ord		NOrd	OOAMA
1310	Ammunition, over 30mm up to 75mm .(Subassign ship types to Navy)	Army-Ord		NOrd	OOAMA
1315	Ammunition, 75mm through 125mm (Subassign ship types to Navy)	Army-Ord		NOrd	OOAMA
1320	Ammunition, over 125mm	Navy-NOrd	Ord		OOAMA
1325	Bombs	Navy-NOrd	Ord		OOAMA
1330	Grenades	Army-Ord		MC	OOAMA
1340	Rockets and Rocket Ammunition	Navy-NOrd	Ord		OOAMA
1345	Land Mines	Army-Ord		MC	OOAMA
1350	Underwater Mine Inert Components	Navy-NOrd	Ord		OOAMA
1351	Underwater Mine Explosive Components	Navy-NOrd	Ord		OOAMA
1355	Torpedo Inert Components	Navy-NOrd	Ord		OOAMA
1356	Torpedo Explosive Components	Navy-NOrd	Ord		OOAMA
1360	Depth Charge Inert Components	Navy-NOrd	Ord		OOAMA

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
1361	Depth Charge Explosive Components	Navy-NOrd	Ord		OOAMA
1365	Military Chemical Agents	Army-CmlC		NOrd	OOAMA
1370	Pyrotechnics	Army-Ord		NOrd	OOAMA
1375	Explosives, Bulk Propellants, and Explosive Devices	Army-Ord		NOrd	OOAMA
1380	Military Biological Agents	Army-CmlC		NOrd	OOAMA
1390	Fuzes and Primers	Army-Ord		NOrd	OOAMA
1395	Miscellaneous Ammunition	Army-Ord		NOrd	OOAMA
	AIRCRAFT AND AIRFRAME STRUCTURAL COMPONENTS				
1510	Aircraft, Fixed Wing	AF- HQ AMC	TC	Aer	
1520	Aircraft, Rotary Wing	AF-HQ AMC	TC	Aer	
1530	Aircraft, Lighter than Air	Navy-Aer	TC		HQ AMC
1540	Gliders	AF-HQ AMC	TC	Aer	
1550	Target Drones	AF-HQ AMC	Ord	Aer	
1560	Airframe Structural Components	AF-HQ AMC	TC	Aer	
	AIRCRAFT COMPONENTS AND ACCESSORIES				
1610	Aircraft Propellers	AF-HRAMA	TC	Aer	
1620	Landing Shock Struts	AF-OOAMA	TC	Aer	
1630	Aircraft Wheel and Brake Systems	AF-OOAMA	TC	Aer	
1640	Aircraft Auxiliary Fuel Tanks	AF-SMAMA	TC	Aer	
1650	Aircraft Hydraulic, Vacuum, and De-Icing System Components	Navy-Aer	TC		OOAMA
1660	Aircraft Air Conditioning, Heating, and Pressurizing Equipment	AF-MOAMA	TC	Aer	

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Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
1670	Parachutes and Aerial Pickup, Delivery, and Cargo Tie Down Equipment	AF-MAAMA	QMC	Aer	
1680	Miscellaneous Aircraft Accessories and Components	AF-MOAMA	TC	Aer	
	AIRCRAFT LAUNCHING, LANDING AND GROUND HANDLING EQUIPMENT				
1710	Aircraft Arresting and Barrier Equipment	Navy-Aer	TC		GADSDEN
1720	Aircraft Launching Equipment	Navy-Aer	TC		GADSDEN
1730	Aircraft Ground Servicing Equipment	AF-GADSDEN	TC	Aer	
1740	Airfield Specialized Trucks and Trailers	AF-GADSDEN	Ord	Aer	
	SHIPS, SMALL CRAFT, PONTOONS, AND FLOATING DOCKS				
1905	Combat Ships and Landing Vessels	Navy-Ships	TC		MOAMA
1910	Transport Vessels, Passenger and Troop	Navy-Ships	TC		MOAMA
1915	Cargo and Tanker Vessels	Navy-Ships	TC		MOAMA
1920	Fishing Vessels	Navy-Ships	TC		MOAMA
1925	Special Service Vessels	Navy-Ships	TC		MOAMA
1930	Barges and Lighters, Cargo	Navy-Ships	TC		MOAMA
1935	Barges and Lighters, Special Purpose	Navy-Ships	TC		MOAMA
1940	Small Craft	Navy-Ships	TC		MOAMA
1945	Pontoons and Floating Docks	Navy-Docks	TC		MOAMA
1950	Floating Drydocks	Navy-Docks	TC		MOAMA
1955	Dredges	Army-TC		Docks	MOAMA
1990	Miscellaneous Vessels	Navy-Ships	TC		MOAMA

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Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
	SHIP AND MARINE EQUIPMENT				
2010	Ship and Boat Propulsion Components	Navy-Ships	TC		MOAMA
2020	Rigging and Rigging Gear	Navy-Ships	TC		MOAMA
2030	Deck Machinery	Navy-Ships	TC		MOAMA
2040	Marine Hardware and Hull Items	Navy-Ships	TC		MOAMA
2050	Buoys	Navy-Ships	CE		MOAMA
2060	Commercial Fishing Equipment	Navy-Ships	TC		MOAMA
2090	Miscellaneous Ship and Marine Equipment	Navy-Ships	TC		MOAMA
	RAILWAY EQUIPMENT				
2210	Locomotives	Army-TC		Docks	MEMPHIS
2220	Rail Cars	Army-TC		Docks	MEMPHIS
2230	Right-of-Way Construction and Maintenance Equipment, Railroad	Army-CE		Docks	MEMPHIS
2240	Locomotive and Rail Car Accessories and Components	Army-TC		Docks	MEMPHIS
2250	Track Materials, Railroad	Army-CE		Docks	MEMPHIS
	MOTOR VEHICLES, TRAILERS, AND CYCLES				
2310	Passenger Motor Vehicles	Army-Ord		Docks	MEMPHIS
2320	Trucks and Truck-Tractors	Army-Ord		Docks	MEMPHIS
2330	Trailers	Army-Ord		Docks	MEMPHIS
2340	Motorcycles, Motor Scooters, and Bicycles	Army-Ord		Docks	MEMPHIS
2350	Tanks and Self-Propelled Weapons	Army-Ord		MC	MEMPHIS
	TRACTORS				
2410	Tractors, Full Track, Low Speed	Army-CE		Docks	MEMPHIS

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
2420	Tractors, Wheeled	Army-CE		Docks	MEMPHIS
2430	Tractors, Track Laying, High Speed	Army-Ord		Docks	MEMPHIS
	VEHICULAR EQUIPMENT COMPONENTS				
2510	Vehicular Cab, Body, and Frame Structural Components	Army-Ord		Docks	MEMPHIS
2520	Vehicular Power Transmission Components	Army-Ord		Docks	MEMPHIS
2530	Vehicular Brake, Steering, Axle, Wheel, and Track Components	Army-Ord		Docks	MEMPHIS
2540	Vehicular Furniture and Accessories	Army-Ord		Docks	MEMPHIS
2590	Miscellaneous Vehicular Components	Army-Ord		Docks	MEMPHIS
	TIRES AND TUBES				
2610	Tires and Tubes, Pneumatic, Except Aircraft	Army-Ord		Docks	SHELBY
2620	Tires and Tubes, Pneumatic, Aircraft	AF-SHELBY	TC	Aer	
2630	Tires, Solid and Cushion	Army-Ord		Docks	SHELBY
2640	Tire Rebuilding and Tire and Tube Repair Materials	Army-Ord		Docks	SHELBY
	ENGINES, TURBINES, AND COMPONENTS				
2805	Gasoline Reciprocating Engines, Except Aircraft; and Components	Army-Ord		Docks	MEMPHIS
2810	Gasoline Reciprocating Engines, Aircraft; and Components	AF 1/	TC	Aer	
2815	Diesel Engines and Components	Navy-Ships	Ord		MEMPHIS
2820	Steam Engines, Reciprocating; and Components	Navy-Ships	CE		MEMPHIS

1/ MAAMA is responsible for items manufactured by Wright Aeronautical Corporation; OCAMA is responsible for items manufactured by GE and Allison Division of GM; and SAAMA is responsible for items manufactured by Pratt and Whitney.

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
2825	Steam Turbines and Components	Navy-Ships	CE		MEMPHIS
2830	Water Turbines and Water Wheels; and Components	Army-CE		Docks	MEMPHIS
2835	Gas Turbines and Jet Engines, Except Aircraft; and Components (Subassign shipboard to Navy; subassign ground service equipment to AF)	Army-Ord		Ships	MEMPHIS
2840	Gas Turbines and Jet Engines, Aircraft; and Components	AF 1/	TC	Aer	
2845	Rocket Engines and Components	AF-OCAMA	Ord	Aer	
2895	Miscellaneous Engines and Components	AF-MEMPHIS	Ord	Aer	
	ENGINE ACCESSORIES				
2910	Engine Fuel System Components, Nonaircraft	Army-Ord		Docks	MEMPHIS
2915	Engine Fuel System Components, Aircraft	AF-SAAMA	TC	Aer	
2920	Engine Electrical System Components, Nonaircraft	Army-Ord		Docks	MEMPHIS
2925	Engine Electrical System Components, Aircraft	AF-SAAMA	TC	Aer	
2930	Engine Cooling System Components, Nonaircraft	Army-Ord		Docks	MEMPHIS
2935	Engine Cooling System Components, Aircraft	AF-OCAMA	TC	Aer	
2940	Engine Air and Oil Filters, Strainers, and Cleaners, Nonaircraft	Army-CE		Ships	MEMPHIS
2945	Engine and Oil Filters, Strainers, and Cleaners, Aircraft	AF-OCAMA	TC	Aer	
2950	Turbosuperchargers	AF-OCAMA	—	Aer	

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Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
2990	Miscellaneous Engine Accessories, Nonaircraft	Army-Ord		Docks	MEMPHIS
2995	Miscellaneous Engine Accessories, Aircraft	AF-OCAMA	TC	Aer	
	MECHANICAL POWER TRANSMISSION EQUIPMENT				
3010	Torque Converters and Speed Changers	Army-Ord		Ships	TOPEKA
3020	Gears, Pulleys, Sprockets, and Transmission Chain	Army-CE		Ships	TOPEKA
3030	Belting, Drive Belts, Fan Belts, and Accessories	Army-Ord		Ships	TOPEKA
3040	Miscellaneous Power Transmission Equipment	Army-Ord		Ships	TOPEKA
	BEARINGS				
3110	Bearings, Antifriction, Unmounted	Navy-Ships	Ord		MEMPHIS
3120	Bearings, Plain, Unmounted	Navy-Ships	Ord		MEMPHIS
3130	Bearings, Mounted	Navy-Ships	Ord		MEMPHIS
	WOODWORKING MACHINERY AND EQUIPMENT				
3210	Sawmill and Planing Mill Machinery	Army-CE		Docks	GENTILE
3220	Woodworking Machines	Navy-Ships	CE		GENTILE
3230	Tools and Attachments for Woodworking Machinery	Navy-Ships	CE		GENTILE
	METALWORKING MACHINERY				
3411	Boring Machines	Navy-Ships	Ord		GENTILE
3412	Broaching Machines	Navy-Ships	Ord		GENTILE
3413	Drilling Machines	Navy-Ships	Ord		GENTILE
3414	Gear Cutting and Finishing Machines	Navy-NOrd	Ord		GENTILE
3415	Grinding Machines	Navy-Ships	Ord		GENTILE

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
3416	Lathes	Navy-Ships	Ord		GENTILE
3417	Milling Machines	Navy-Ships	Ord		GENTILE
3418	Planers	Navy-Ships	Ord		GENTILE
3419	Miscellaneous Machine Tools	Navy-NOrd	Ord		GENTILE
3422	Rolling Mills and Drawing Machines	Navy-Ships	Ord		GENTILE
3424	Metal Heat Treating Equipment	Army-Ord		Ships	GENTILE
3426	Metal Finishing Equipment	Navy-Ships	Ord		GENTILE
3428	Foundry Equipment and Supplies	Navy-Ships	Ord		GENTILE
3432	Welding, Flame Cutting, and Metalizing Equipment and Supplies	Navy-Ships	Ord		GENTILE
3441	Bending and Forming Machines	Navy-Ships	Ord		GENTILE
3442	Hydraulic and Pneumatic Presses, Power Driven	Navy-NOrd	Ord		GENTILE
3443	Mechanical Presses, Power Driven	Navy-NOrd	Ord		GENTILE
3444	Manual Presses	Navy-Ships	Ord		GENTILE
3445	Punching and Shearing Machines	Navy-Ships	Ord		GENTILE
3446	Forging Machinery and Hammers	Navy-NOrd	Ord		GENTILE
3447	Wire and Metal Ribbon Forming Machines	AF-GENTILE	Ord	Ships	
3448	Riveting Machines	AF-GENTILE	Ord	Ships	
3449	Miscellaneous Secondary Metal Forming and Cutting Machines	Navy-Ships	Ord		GENTILE
3450	Machine Tools, Portable	Navy-Ships	Ord		GENTILE
3455	Cutting Tools for Machine Tools	Navy-Ships	Ord		GENTILE
3456	Cutting and Forming Tools for Secondary Metalworking Machinery	Navy-Ships	Ord		GENTILE
3460	Machine Tool Accessories	Navy-Ships	Ord		GENTILE

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
3465	Production Jigs, Fixtures, and Templates	Navy-Ships	Ord		GENTILE
3470	Machine Shop Sets, Kits, and Outfits	Navy-Ships	Ord		GENTILE
	SERVICE AND TRADE EQUIPMENT				
3510	Laundry and Dry Cleaning Equipment	Army-QMC		Docks	MEMPHIS
3520	Shoe Repairing Equipment	Army-QMC		Ships	MEMPHIS
3530	Sewing Machines, Industrial	Army-QMC		Ships	MEMPHIS
3540	Wrapping and Packaging Machinery	Army-QMC		S&A	MEMPHIS
3550	Vending and Coin Operated Machines	Army-QMC		S&A	MEMPHIS
3590	Miscellaneous Service and Trade Equipment	Army-QMC		S&A	MEMPHIS
	SPECIAL INDUSTRY MACHINERY				
3605	Food Products Machinery and Equipment	Army-QMC		S&A	SHELBY
3610	Printing, Duplicating, and Bookbinding Equipment	Army-QMC		Ships	SHELBY
3615	Pulp and Paper Industries Machinery	Army-QMC		Docks	SHELBY
3620	Rubber Working Machinery	Army-Ord		Ships	SHELBY
3625	Textile Industries Machinery	Army-QMC		MC	SHELBY
3630	Clay and Concrete Products Industries Machinery	Army-CE		Docks	SHELBY
3635	Glass Industries Machinery	Army-Ord		S&A	SHELBY
3640	Tobacco Manufacturing Machinery	Army-QMC		S&A	SHELBY
3645	Leather Tanning and Leather Working Industries Machinery	Army-QMC		S&A	SHELBY
3650	Chemical and Pharmaceutical Products Manufacturing Machinery	Army-Med		S&A	SHELBY

Class	Title	Assignee Activity	Participating Activity		
			Army	Navy	AF
3655	Gas Generating Equipment (Subassign airborne generating equipment to AF)	Army-CE		Docks	SHELBY
3695	Miscellaneous Special Industry Machinery	Army-QMC		NOrd	SHELBY
	AGRICULTURAL MACHINERY AND EQUIPMENT				
3710	Soil Preparation Equipment	Army-CE		Docks	GADSDEN
3720	Harvesting Equipment	Army-CE		Docks	GADSDEN
3730	Dairy, Poultry, and Livestock Equipment	Army-QMC		Docks	GADSDEN
3740	Pest, Disease, and Frost Control Equipment	Army-CE		Docks	GADSDEN
3750	Gardening Implements and Tools	Army-CE		Docks	GADSDEN
3760	Animal Drawn Vehicles and Farm Trailers	Army-CE		Docks	GADSDEN
3770	Saddlery, Harness, Whips, and Related Animal Furnishings	Army-QMC		Docks	GADSDEN
	CONSTRUCTION, MINING, EXCAVATING, AND HIGHWAY MAINTENANCE EQUIPMENT				
3805	Earth Moving and Excavating Equipment (Subassign graders, maintainers, track-laying ditchers to Navy)	Army-CE		Docks	MEMPHIS
3810	Cranes and Crane-Shovels (Subassign track-laying crane-shovels to Navy)	Army-CE		Docks	MEMPHIS
3815	Crane and Crane-Shovel Attachments (Subassign track-laying crane-shovel attachments to Navy)	Army-CE		Docks	MEMPHIS
3820	Mining, Rock Drilling, Earth Boring, and Related Equipment (Subassign crushing, pulverizing and screening machinery to Navy)	Army-CE		Docks	MEMPHIS

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
3825	Road Clearing and Cleaning Equipment (Subassign road and pavement clearing equipment (airfield) to AF)	Navy-Docks	CE		MEMPHIS
3830	Truck and Tractor Attachments	Army-CE		Docks	MEMPHIS
3835	Petroleum Production and Distribution Equipment	Navy-Docks	CE		MEMPHIS
3895	Miscellaneous Construction Equipment (Subassign mixing machinery, concrete mixing, paving, placing and related equipment to Navy)	Army-CE		Docks	MEMPHIS
	MATERIALS HANDLING EQUIPMENT				
3910	Conveyors (Subassign airborne types to AF)	Navy-S&A	QMC		MEMPHIS
3920	Materials Handling Equipment, Nonself-Propelled	Navy-S&A	QMC		MEMPHIS
3930	Warehouse Trucks and Tractors, Self-Propelled	Navy-S&A	QMC		MEMPHIS
3940	Blocks, Tackle, Rigging, and Slings	Army-TC		Ships	MEMPHIS
3950	Winches, Hoists, Cranes, and Derricks	Navy-Ships	CE		MEMPHIS
3960	Elevators and Escalators	Navy-Docks	CE		MEMPHIS
3990	Miscellaneous Materials Handling Equipment	Navy-S&A	QMC		MEMPHIS
	ROPE, CABLE, CHAIN, AND FITTINGS				
4010	Chain and Wire Rope	Navy-Ships	TC		TOPEKA
4020	Fiber Rope, Cordage, and Twine	Navy-Ships	QMC		TOPEKA
4030	Fittings for Rope, Cable, and Chain	Navy-Ships	TC		TOPEKA
	REFRIGERATION AND AIR CONDITIONING EQUIPMENT				
4110	Self-Contained Refrigeration Units and Accessories	Army-QMC		Docks	GADSDEN

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
4120	Self-Contained Air Conditioning Units and Accessories	AF-GADSDEN	CE	Ships	
4130	Refrigeration and Air Conditioning Plants and Components	Navy-Ships	CE		GADSDEN
4140	Fans and Air Circulators, Non-industrial	Army-CE		Docks	GADSDEN
	FIRE FIGHTING, RESCUE, AND SAFETY EQUIPMENT				
4210	Fire Fighting Equipment (Subassign air crash equipment to AF)	Army-CE		Docks	SHELBY
4220	Marine Lifesaving and Diving Equipment	Navy-Ships	TC		SHELBY
4230	Decontaminating and Impregnating Equipment	Army-CmlC		Docks	SHELBY
4240	Safety and Rescue Equipment	Army-CE		Ships	SHELBY
	PUMPS AND COMPRESSORS				
4310	Compressors and Vacuum Pumps	Army-CE		Ships	GADSDEN
4320	Power and Hand Pumps	Army-CE		Ships	GADSDEN
4330	Centrifugals, Separators, and Pressure and Vacuum Filters	AF-GADSDEN	CE	Ships	
	FURNACE, STEAM PLANT, AND DRYING EQUIPMENT				
4410	Industrial Boilers	Navy-Ships	CE		GADSDEN
4420	Heat Exchangers and Steam Condensers	Navy-Ships	CE		GADSDEN
4430	Industrial Furnaces, Kilns, Lehrs, and Ovens	Navy-Ships	CE		GADSDEN
4440	Driers, Dehydrators, and Anhydrators	Navy-Docks	CE		GADSDEN
4450	Industrial Fan and Blower Equipment	Navy-Ships	CE		GADSDEN
4460	Air Purification Equipment	Navy-Ships	CE		GADSDEN

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Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
	PLUMBING, HEATING, AND SANITATION EQUIPMENT				
4510	Plumbing Fixtures and Accessories	Navy-Docks	CE		GADSDEN
4520	Space Heating Equipment and Domestic Water Heaters	Army-CE		Docks	GADSDEN
4530	Fuel Burning Equipment Units	Army-CE		Docks	GADSDEN
4540	Miscellaneous Plumbing, Heating, and Sanitation Equipment	Army-CE		Docks	GADSDEN
	WATER PURIFICATION AND SEWAGE TREATMENT EQUIPMENT				
4610	Water Purification Equipment	Army-CE		Docks	GADSDEN
4620	Water Distillation Equipment, Marine and Industrial	Navy-Ships	CE		GADSDEN
4630	Sewage Treatment Equipment	Army-CE		Docks	GADSDEN
	PIPE, TUBING, HOSE, AND FITTINGS				
4710	Pipe and Tube, Metal	AF-TOPEKA	CE	Ships	
4720	Hose and Tubing, Flexible	Navy-Ships	Ord		SHELBY
4730	Fittings and Specialties; Hose, Pipe, and Tube	AF-TOPEKA	CE	Ships	
	VALVES				
4810	Valves, Powered	Navy-Ships	CE		MOAMA
4820	Valves, Nonpowered	Navy-Ships	CE		MOAMA
	MAINTENANCE AND REPAIR SHOP EQUIPMENT				
4910	Motor Vehicle, Maintenance and Repair Shop Specialized Equipment	Army-Ord		Docks	TOPEKA
4920	Aircraft Maintenance and Repair Shop Specialized Equipment	AF-TOPEKA	TC	Aer	
4925	Ammunition Maintenance and Repair Shop Specialized Equipment	Navy-NOrd	Ord		TOPEKA
4930	Lubrication and Fuel Dispensing Equipment	Army-Ord		Docks	TOPEKA

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
4940	Miscellaneous Maintenance and Repair Shop Specialized Equipment	Army-Ord		Docks	TOPEKA
	HAND TOOLS				
5110	Hand Tools, Edged, Nonpowered	Navy-Ships	Ord		TOPEKA
5120	Hand Tools, Nonedged, Nonpowered	Navy-Ships	Ord		TOPEKA
5130	Hand Tools, Power Driven	Navy-Ships	Ord		TOPEKA
5133	Drill Bits, Counterbores, and Countersinks: Hand and Machine	Navy-Ships	Ord		TOPEKA
5136	Taps, Dies, and Collets: Hand and Machine	Navy-Ships	Ord		TOPEKA
5140	Tool and Hardware Boxes	Navy-Ships	Ord		TOPEKA
5180	Sets, Kits, and Outfits of Hand Tools	Navy-Ships	Ord		TOPEKA
	MEASURING TOOLS				
5210	Measuring Tools, Craftsman's	Navy-Ships	Ord		GENTILE
5220	Inspection Gages	Army-Ord		NOrd	GENTILE
5280	Sets, Kits, and Outfits of Measuring Tools	Navy-Ships	Ord		GENTILE
	HARDWARE AND ABRASIVES				
5305	Screws	AF-TOPEKA	Ord	Ships	
5306	Bolts	AF-TOPEKA	Ord	Ships	
5307	Studs	AF-TOPEKA	Ord	Ships	
5310	Nuts and Washers	AF-TOPEKA	Ord	Ships	
5315	Nails, Keys, and Pins	AF-TOPEKA	CE	S&A	
5320	Rivets	AF-TOPEKA	Ord	Aer	
5325	Fastening Devices	AF-TOPEKA	Ord	Aer	
5330	Packing and Gasket Materials	Navy-Ships	Ord		TOPEKA
5335	Metal Screening	Army-CE		Docks	TOPEKA

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
5340	Miscellaneous Hardware	AF-TOPEKA	CE	Docks	
5345	Disks and Stones, Abrasive	Navy-Ships	CE		TOPEKA
5350	Abrasive Materials	Navy-Ships	CE		TOPEKA
5355	Knobs and Pointers	AF-TOPEKA	Ord	Ships	
	PREFABRICATED STRUCTURES AND SCAFFOLDING				
5410	Prefabricated and Portable Buildings	Navy-Docks	CE		SHELBY
5420	Bridges, Fixed and Floating	Army-CE		MC	SHELBY
5430	Storage Tanks	Navy-Docks	CE		SHELBY
5440	Scaffolding Equipment and Concrete Forms	Army-CE		Docks	SHELBY
5450	Miscellaneous Prefabricated Structures	Army-CE		Docks	SHELBY
	LUMBER, MILLWORK, PLYWOOD, AND VENEER				
5510	Lumber and Related Basic Wood Materials	Army-CE		Ships	TOPEKA
5520	Millwork	Army-CE		Docks	TOPEKA
5530	Plywood and Veneer	Army-CE		Ships	TOPEKA
	CONSTRUCTION AND BUILDING MATERIALS				
5610	Mineral Construction Materials, Bulk	Army-CE		Docks	TOPEKA
5620	Building Glass, Tile, Brick, and Block	Army-CE		Docks	TOPEKA
5630	Pipe and Conduit, Nonmetallic	Army-CE		Docks	TOPEKA
5640	Wallboard, Building Paper, and Thermal Insulation Materials	Army-CE		Docks	TOPEKA
5650	Roofing and Siding Materials	Army-CE		Docks	TOPEKA
5660	Fencing, Fences, and Gates	Army-CE		Docks	TOPEKA
5670	Architectural and Related Metal Products	Army-CE		Docks	TOPEKA
5680	Miscellaneous Construction Materials	Army-CE		Docks	TOPEKA

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
	COMMUNICATION EQUIPMENT				
5805	Telephone and Telegraph Equipment	Army-SigC		Ships	ROME
5810	Cryptographic Equipment	NSA	SigC	Ships	—
5815	Teletype and Facsimile Equipment	Army-SigC		Ships	ROME
5835	Sound Recording and Reproducing Equipment	Navy-Ships	SigC		ROME
5845	Underwater Sound Equipment	Navy-Ships	SigC		ROME
5850	Visible and Invisible Light Communication Equipment	Navy-Ships	CE		ROME
5895	Miscellaneous Communication Equipment	Navy-Ships	SigC		GENTILE
	ELECTRICAL AND ELECTRONIC EQUIPMENT COMPONENTS				
5905	Resistors	Army-SigC		Ships	GENTILE
5910	Capacitors	AF-GENTILE	SigC	Ships	
5915	Filters and Networks	AF-GENTILE	SigC	Ships	
5920	Fuses and Lightning Arresters	Navy-Ships	CE		GENTILE
5925	Circuit Breakers	Navy-Ships	CE		GENTILE
5930	Switches	AF-GENTILE	CE	Ships	
5935	Connectors, Electrical	AF-GENTILE	SigC	Ships	
5940	Lugs, Terminals, and Terminal Strips	Army-SigC		Ships	GENTILE
5945	Relays, Contactors, and Solenoids	Navy-Ships	SigC		GENTILE
5950	Coils and Transformers	Army-SigC		Ships	GENTILE
5955	Piezoelectric Crystals	Army-SigC		Ships	GENTILE
5960	Electron Tubes, Transistors, and Rectifying Crystals	Navy-Ships	SigC		GENTILE
5965	Headsets, Handsets, Microphones and Speakers	Army-SigC		Ships	GENTILE

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
5970	Electrical Insulators and Insulating Materials	Navy-Ships	SigC		GENTILE
5975	Electrical Hardware and Supplies	Army-CE		Docks	GENTILE
5977	Electrical Contact Brushes and Electrodes	Navy-Ships	CE		GENTILE
5985	Antennae, Waveguides, and Related Equipment	Navy-Ships	SigC		GENTILE
5990	Synchros and Resolvers	Navy-WOrd	Ord		GENTILE
5995	Cable, Cord, and Wire Assemblies: Communication Equipment	Army-SigC		Ships	GENTILE
5999	Miscellaneous Electrical and Electronic Components	AF-GENTILE	SigC	Ships	
	ELECTRIC WIRE, AND POWER AND DISTRIBUTION EQUIPMENT				
6105	Motors, Electrical	Navy-Ships	CE		SAAMA
6110	Electrical Control Equipment (Subassign portable generator control equipment to Army)	Navy-Ships	CE		ROME
6115	Generators and Generator Sets, Electrical (Subassign portable generators and sets to Army)	Navy-Ships	CE		GADSDEN
6120	Transformers: Distribution and Power Station	Army-CE		Ships	ROME
6125	Converters, Electrical	AF-SAAMA	CE	Ships	
6130	Rectifying Equipment, Electrical	Navy-Ships	CE		ROME
6135	Batteries, Primary	Army-SigC		Ships	ROME
6140	Batteries, Secondary (Subassign vehicular automotive batteries to Army)	Navy-Ships	SigC		ROME
6145	Wire and Cable, Electrical	Army-SigC		Ships	ROME
6150	Miscellaneous Electric Power and Distribution Equipment	Army-CE		Ships	ROME

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
	LIGHTING FIXTURES AND LAMPS				
6210	Indoor and Outdoor Electric Lighting Fixtures (Subassign airbase lighting to AF)	Navy-Ships	CE		ROME
6220	Electric Vehicular Lights and Fixtures	Army-Ord		Docks	SAAMA
6230	Electric Portable and Hand Lighting Equipment	Army-CE		Ships	ROME
6240	Electric Lamps	Navy-Ships	CE		ROME
6250	Ballasts, Lampholders, and Starters	Navy-Ships	CE		ROME
6260	Nonelectric Lighting Fixtures	Army-QMC		Docks	ROME
	ALARM AND SIGNAL SYSTEMS				
6310	Traffic and Transit Signal Systems	Army-CE		Docks	MOAMA
6320	Shipboard Alarm and Signal Systems	Navy-Ships	TC		MOAMA
6330	Railroad Signal and Warning Devices	Army-CE		Docks	MOAMA
6340	Aircraft Alarm and Signal Systems	AF-MOAMA	TC	Aer	
6350	Miscellaneous Alarm and Signal Systems	Army-CE		Ships	MOAMA
	MEDICAL, DENTAL, AND VETERINARY EQUIPMENT AND SUPPLIES				
6505	Drugs, Biologicals, and Official Reagents	ASMPA	Med	BuMed	GADSDEN
6510	Surgical Dressing Materials	ASMPA	Med	BuMed	GADSDEN
6515	Medical and Surgical Instruments, Equipment, and Supplies	ASMPA	Med	BuMed	GADSDEN
6520	Dental Instruments, Equipment, and Supplies	ASMPA	Med	BuMed	GADSDEN
6525	X-ray Equipment and Supplies: Medical, Dental, Veterinary	ASMPA	Med	BuMed	GADSDEN

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
6530	Hospital Furniture, Equipment, Utensils, and Supplies	ASMPA	Med	BuMed	GADSDEN
6535	Veterinary Instruments, Equipment, and Supplies	ASMPA	Med	BuMed	GADSDEN
6540	Opticians' Instruments, Equipment, and Supplies	ASMPA	Med	BuMed	GADSDEN
6545	Medical Sets, Kits, and Outfits	ASMPA	Med	BuMed	GADSDEN
	INSTRUMENTS AND LABORATORY EQUIPMENT				
6605	Navigational Instruments	Navy-Ships	TC		MAAMA
6610	Flight Instruments	AF-MAAMA	TC	Aer	
6615	Automatic Pilot Mechanisms and Airborne Gyro Components	AF-MAAMA	TC	Aer	
6620	Engine Instruments	AF-MAAMA	CE	Aer	
6625	Electrical and Electronic Properties Measuring and Testing Instruments	Army-SigC		Ships	GENTILE
6630	Chemical Analysis Instruments	Army-CmlC		NOrd	GENTILE
6635	Physical Properties Testing Equipment	Army-Ord		NOrd	GENTILE
6640	Laboratory Equipment and Supplies	Army-CmlC		NOrd	GENTILE
6645	Time Measuring Instruments	AF-MAAMA	Ord	Ships	
6650	Optical Instruments (Subassign shipboard instruments to Navy)	Army-Ord		Ships	MAAMA
6655	Geophysical and Astronomical Instruments	AF-MAAMA	CE	Ships	
6660	Meteorological Instruments and Apparatus	AF-ROME	SigC	Aer	
6665	Hazard-detecting Instruments and Apparatus	Navy-Ships	SigC		SAAMA
6670	Scales and Balances	Army-QMC		Ships	GENTILE
6675	Drafting, Surveying, and Mapping Instruments	Army-CE		Docks	MAAMA

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Class	Title	Assignee Activity	Participating Activity		
			Army	Navy	AF
6680	Liquid and Gas Flow, Liquid Level, and Mechanical Motion Measuring Instruments	Navy-Aer	CE		MAAMA
6685	Pressure, Temperature, and Humidity Measuring and Controlling Instruments	AF-MAAMA	SigC	Aer	
6695	Combination and Miscellaneous Instruments	AF-GENTILE	CE	Aer	
	PHOTOGRAPHIC EQUIPMENT				
6710	Cameras, Motion Picture (Subassign airborne to Navy)	Army-SigC		Aer	MOAMA
6720	Cameras, Still Picture	AF-MOAMA	SigC	Aer	
6730	Photographic Projection Equipment	Navy-Ships	SigC		MOAMA
6740	Photographic Developing and Finishing Equipment	Army-SigC		Aer	MOAMA
6750	Photographic Supplies	Navy-Aer	SigC		ROME
6760	Photographic Equipment and Accessories	AF-MOAMA	SigC	Aer	
6770	Film, Processed	AF-MOAMA	SigC	Aer	
6780	Photographic Sets, Kits, and Outfits	AF-MOAMA	SigC	Aer	
	CHEMICALS AND CHEMICAL PRODUCTS				
6810	Chemicals	Army-CmlC		Ships	TOPEKA
6820	Dyes	Army-CmlC		Ships	TOPEKA
6830	Gases: Compressed and Liquefied	Army-CE		Ships	TOPEKA
6840	Pest Control Agents and Disinfectants	Navy-Ships	QMC		TOPEKA
6850	Miscellaneous Chemical Specialties	Army-CmlC		Ships	TOPEKA
	TRAINING AIDS AND DEVICES				
6910	Training Aids	AF-OOAMA	SigC	Aer	
6920	Armament Training Devices	AF-OOAMA	Ord	Aer	

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
6930	Operational Training Devices	AF-OOAMA	CE	Aer	
6940	Communication Training Devices	AF-OOAMA	SigC	Ships	
	FURNITURE				
7105	Household Furniture	Army-QMC		Docks	GADSDEN
7110	Office Furniture	Army-QMC		S&A	GADSDEN
7125	Cabinets, Lockers, Bins, and Shelving	Army-QMC		Docks	GADSDEN
7195	Miscellaneous Furniture and Fixtures	Army-QMC		Docks	GADSDEN
	HOUSEHOLD AND COMMERCIAL FURNISHINGS AND APPLIANCES				
7210	Household Furnishings	Army-QMC		S&A	GADSDEN
7220	Floor Coverings	Navy-Docks	QMC		GADSDEN
7230	Draperies, Awnings, and Shades	Navy-S&A	QMC		GADSDEN
7240	Household and Commercial Utility Containers	Army-QMC		Ships	GADSDEN
7290	Miscellaneous Household and Commercial Furnishings and Appliances	Army-QMC		S&A	GADSDEN
	FOOD PREPARATION AND SERVING EQUIPMENT				
7310	Food Cooking, Baking, and Warming Equipment	Army-QMC		Ships	MEMPHIS
7320	Kitchen Equipment and Appliances	Army-QMC		Ships	MEMPHIS
7330	Kitchen Hand Tools and Utensils	Army-QMC		Ships	MEMPHIS
7340	Cutlery and Flatware	Army-QMC		Ships	MEMPHIS
7350	Tableware	Army-QMC		Ships	MEMPHIS
7360	Sets, Kits, and Outfits; Food Preparation and Serving	Army-QMC		Ships	MEMPHIS
	OFFICE MACHINES				
7410	Punched Card System Machines	AF-MEMPHIS	QMC	S&A	

Class	Title	Assignee Activity	Participating Activity		
			Army	Navy	AF
7420	Billing and Computing Machines	Army-QMC		S&A	MEMPHIS
7430	Typewriters and Office Type Composing Machines	Army-QMC		S&A	MEMPHIS
7490	Miscellaneous Office Machines	Army-QMC		S&A	MEMPHIS
	OFFICE SUPPLIES				
7510	Office Supplies	Navy-S&A	QMC		MEMPHIS
7520	Office Devices and Accessories	Navy-S&A	QMC		MEMPHIS
7530	Stationery and Record Forms	Navy-S&A	QMC		MEMPHIS
	BOOKS, MAPS, AND OTHER PUBLICATIONS				
7610	Books and Pamphlets	AF-SHELBY	QMC	Ships	
7630	Newspapers and Periodicals	AF-SHELBY	QMC	Ships	
7640	Maps, Atlases, Charts, and Globes	AF-SHELBY	CE	Ships	
7660	Sheet and Book Music	AF-SHELBY	QMC	S&A	
7670	Microfilm, Processed	AF-HQ AMC	SigC	Aer	
7690	Miscellaneous Printed Matter	Navy-S&A	QMC		SHELBY
	MUSICAL INSTRUMENTS, PHONOGRAPHS, AND HOME TYPE RADIOS				
7710	Musical Instruments	Army-QMC		Ships	SHELBY
7720	Musical Instrument Parts and Accessories	Army-QMC		Ships	SHELBY
7730	Phonographs, Radios, and Television Sets: Home Type	Army-SigC		Ships	SHELBY
7740	Phonograph Records	Army-SigC		Ships	SHELBY
	RECREATIONAL AND ATHLETIC EQUIPMENT				
7810	Athletic and Sporting Equipment	Army-QMC		S&A	SHELBY
7820	Games, Toys, and Wheeled Goods	Army-QMC		S&A	SHELBY
7830	Recreational and Gymnastic Equipment	Army-QMC		S&A	SHELBY

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
	CLEANING EQUIPMENT AND SUPPLIES				
7910	Floor Polishers and Vacuum Cleaners	Army-CE		S&A	TOPEKA
7920	Brooms, Brushes, Mops, and Sponges	Navy-Ships	QMC		TOPEKA
7930	Cleaning and Polish Compounds and Preparations	Army-QMC		Ships	TOPEKA
	BRUSHES, PAINTS, SEALERS, AND ADHESIVES				
8010	Paints, Dopes, Varnishes, and Related Products	Navy-Ships	CE		TOPEKA
8020	Paint and Artists' Brushes	Navy-Ships	CE		TOPEKA
8030	Preservative and Sealing Compounds	Army-Ord		Ships	TOPEKA
8040	Adhesives	Navy-Aer	Ord		TOPEKA
	CONTAINERS, PACKAGING, AND PACKING SUPPLIES				
8105	Bags and Sacks	Army-QMC		S&A	GADSDEN
8110	Drums and Cans	Army-QMC		S&A	GADSDEN
8115	Boxes, Cartons and Crates	Navy-S&A	QMC		GADSDEN
8120	Gas Cylinders (Subassign shatter-proof gas cylinders to Navy)	Army-CE		Ships	MAAMA
8125	Bottles and Jars	ASMPA	Med	BuMed	GADSDEN
8130	Reels and Spools	Navy-Ships	SigC		GADSDEN
8135	Packaging and Packing Bulk Materials	AF-GADSDEN	QMC	S&A	
8140	Ammunition Boxes, Packages, and Special Containers	Navy-NOrd	Ord		GADSDEN
	TEXTILES, LEATHER, AND FURS				
8305	Textile Fabrics	Army-QMC		S&A & MC	SHELBY
8310	Yarn and Thread	Army-QMC		S&A & MC	SHELBY

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
8315	Notions and Apparel Findings	Army-QMC		S&A & MC	SHELBY
8320	Padding and Stuffing Materials	Army-QMC		S&A & MC	SHELBY
8325	Fur Materials	Army-QMC		S&A & MC	SHELBY
8330	Leather	Army-QMC		S&A & MC	SHELBY
8335	Shoe Findings and Soling Materials	Army-QMC		S&A & MC	SHELBY
8340	Tents and Tarpaulins	Army-QMC		S&A & MC	SHELBY
8345	Flags and Pennants	Army-QMC		S&A & MC	SHELBY
	CLOTHING AND INDIVIDUAL EQUIPMENT				
8405	Outerwear, Men's	Army-QMC		S&A & MC	SHELBY
8410	Outerwear, Women's	Army-QMC		S&A & MC	SHELBY
8415	Clothing, Special Purpose	Army-QMC		S&A & MC	SHELBY
8420	Underwear and Nightwear, Men's	Army-QMC		S&A & MC	SHELBY
8425	Underwear and Nightwear, Women's	Army-QMC		S&A & MC	SHELBY
8430	Footwear, Men's	Army-QMC		S&A & MC	SHELBY
8435	Footwear, Women's	Army-QMC		S&A & MC	SHELBY
8440	Hosiery, Handwear, and Clothing Accessories: Men's	Army-QMC		S&A & MC	SHELBY
8445	Hosiery, Handwear, and Clothing Accessories : Women's	Army-QMC		S&A & MC	SHELBY
8450	Children's and Infants' Apparel and Accessories	Army-QMC		S&A & MC	SHELBY

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
8455	Badges and Insignia	Army-QMC		S&A & MC	SHELBY
8460	Luggage	Army-QMC		S&A & MC	SHELBY
8465	Individual Equipment	Army-QMC		S&A & MC	SHELBY
	TOILETRIES				
8510	Perfumes, Toilet Preparations, and Powders	Army-QMC		S&A	SHELBY
8520	Toilet Soap, Shaving Preparations, and Dentrifices	Army-QMC		S&A	SHELBY
8530	Personal Toiletry Articles	Army-QMC		S&A	SHELBY
8540	Toiletry Paper Products	Army-QMC		S&A	SHELBY
	AGRICULTURAL SUPPLIES				
8710	Forage and Feed	Army-QMC		Docks	GADSDEN
8720	Fertilizers	Army-QMC		Docks	GADSDEN
8730	Seeds and Nursery Stock	Army-QMC		Docks	GADSDEN
	SUBSISTENCE				
8905	Meat, Poultry, and Fish	Army-QMC		S&A & MC	HQ AMC
8910	Dairy Foods and Eggs	Army-QMC		S&A & MC	HQ AMC
8915	Fruits and Vegetables	Army-QMC		S&A & MC	HQ AMC
8920	Bakery and Cereal Products	Army-QMC		S&A & MC	HQ AMC
8925	Sugar, Confectionery, and Nuts	Army-QMC		S&A & MC	HQ AMC
8930	Jams, Jellies, and Preserves	Army-QMC		S&A & MC	HQ AMC
8935	Soups and Bouillons	Army-QMC		S&A & MC	HQ AMC

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
8940	Special Dietary Foods and Food Specialty Preparations	Army-QMC		S&A & MC	HQ AMC
8945	Food Oils and Fats	Army-QMC		S&A & MC	HQ AMC
8950	Condiments and Related Products	Army-QMC		S&A & MC	HQ AMC
8955	Coffee, Tea, and Cocoa	Army-QMC		S&A & MC	HQ AMC
8960	Beverages, Nonalcoholic	Army-QMC		S&A & MC	HQ AMC
8970	Composite Food Packages	Army-QMC		S&A & MC	HQ AMC
8975	Tobacco Products	Army-QMC		S&A & MC	HQ AMC
	FUELS, LUBRICANTS, OILS, AND WAXES				
9110	Fuels, Solid (Subassign to Navy coal used in commercial-industrial facilities or used in central heating plants in furnaces rated at 600,000 . BTU/Hour and larger)	Army-CE		Docks	MAAMA
9120	Fuel Gases	Army-CE		Docks	MAAMA
9130	Gasoline and Jet Fuel	AF-MAAMA	Ord	Aer	
9140	Fuel Oils	Navy-Ships	CE		MAAMA
9150	Oils and Greases: Cutting, Lubricating, and Hydraulic	Army-Ord		Ships	MAAMA
9160	Miscellaneous Waxes, Oils, and Fats	Army-QMC		Ships	MAAMA
	NONMETALLIC FABRICATED MATERIALS				
9310	Paper and Paperboard	Army-QMC		Aer	SHELBY
9320	Rubber Fabricated Materials	Army-Ord		Ships	SHELBY
9330	Plastic Fabricated Materials	Navy-Ships	SigC		SHELBY

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
9340	Glass Fabricated Materials	Army-Ord		Ships	SHELBY
9350	Refractories and Fire Surfacing Materials	Navy-Ships	CE		SHELBY
9390	Miscellaneous Fabricated Nonmetallic Materials	Navy-Ships	CE		SHELBY
	NONMETALLIC CRUDE MATERIALS				
9410	Crude Grades of Plant Materials	Navy-Ships	QMC		SHELBY
9420	Fibers: Vegetable, Animal, and Synthetic	Navy-Ships	QMC		SHELBY
9430	Miscellaneous Crude Animal Products, Inedible	Army-QMC		Ships	SHELBY
9440	Miscellaneous Crude Agricultural and Forestry Products	Army-QMC		Ships	SHELBY
9450	Nonmetallic Scrap	Army-QMC		Ships	SHELBY
	METAL BARS, SHEETS, AND SHAPES				
9505	Wire, Nonelectrical, Iron and Steel	Navy-NOrd	CE		TOPEKA
9510	Bars and Rods, Iron and Steel	Army-Ord		Ships	TOPEKA
9515	Plate, Sheet, and Strip: Iron and Steel	Navy-Ships	Ord		TOPEKA
9520	Structural Shapes, Iron and Steel	Army-CE		Ships	TOPEKA
9525	Wire, Nonelectrical, Nonferrous Base Metal	AF-TOPEKA	CE	Aer	
9530	Bars and Rods, Nonferrous Base Metal	AF-TOPEKA	Ord	Aer	
9535	Plate, Sheet, Strip, and Foil: Nonferrous Base Metal	AF-TOPEKA	Ord	Aer	
9540	Structural Shapes, Nonferrous Base Metal	AF-TOPEKA	CE	Aer	
9545	Plate, Sheet, Strip, Foil, and Wire: Precious Metal	AF-TOPEKA	QMC	Aer	

Class	Title	Assignee Activity	Participating Activity Army	Navy	AF
	ORES, MINERALS, AND THEIR PRIMARY PRODUCTS				
9620	Minerals, Natural and Synthetic	AF-TOPEKA	CE	Ships	
9630	Additive Metal Materials and Master Alloys	AF-TOPEKA	Ord	Aer	
9640	Iron and Steel Primary and Semi-finished Products	Army-Ord		NOrd	TOPEKA
9650	Nonferrous Base Metal Refinery and Intermediate Forms	AF-TOPEKA	Ord	Ships	
9660	Precious Metals Primary Forms	AF-TOPEKA	QMC	Ships	
9670	Iron and Steel Scrap	Army-Ord		Ships	TOPEKA
9680	Nonferrous Metal Scrap	AF-TOPEKA	Ord	Ships	
	MISCELLANEOUS				
9905	Signs, Advertising Displays, and Identification Plates	Army-CE		Docks	SHELBY
9910	Jewelry	Navy-Ships	QMC		SHELBY
9920	Smokers' Articles and Matches	Army-QMC		S&A	SHELBY
9925	Ecclesiastical Equipment, Furnishings, and Supplies	Navy-Ships	QMC		HQ AMC
9930	Memorials; Cemeterial and Mortuary Equipment and Supplies	Army-QMC		BuMed	HQ AMC

EXHIBIT B

DEFENSE STANDARDIZATION PROGRAM FOR FISCAL YEAR 1957

ASSISTANT SECRETARY OF DEFENSE

Washington 25, D. C.

Supply and Logistics 15 JUNE 1956.
SS–2

Memorandum for the—
Assistant Secretary of the Army (Logistics).
Assistant Secretary of the Navy (Material).
Assistant Secretary of the Air Force (Materiel).

Subject: Defense standardization program—Program for fiscal year 1957.

Refs:
(*a*) DOD Directive 4120.3, defense standardization program, dated October 15, 1954.
(*b*) SD memorandum for Secretaries of Army, Navy, and Air Force; Assistant Secretaries of Defense and General Counsel, dated January 25, 1956, subject, defense standardization program.

This memorandum transmits the defense standardization program for fiscal year 1957 as contained in enclosure 1 and its attachments. That portion of the program contained in attachments A1, A2, and A3 was furnished by the military departments. The program data, including schedules, contained in attachments B1, B2, and B3, was developed by the program and scheduling committee and was coordinated within each military department by the departmental members on this committee.

By reference (*b*), the Secretary of Defense directed that this program be supported and expedited. Accordingly, it is requested that this program for fiscal year 1957 receive your official endorsement in its implementation within your department. A reply from you stating that such action has been taken and that your Department will assign the additional funds and personnel required for the full attainment of the fiscal year 1957 program, also, is requested.

The defense standardization program for fiscal year 1958 is currently under development and coordination within the military departments. It will be transmitted to your Department about June 30, 1956. The program for fiscal year 1958 will require additional funds and personnel over those required for fiscal year 1957.

A copy of this memorandum, including its enclosure and attachments, is being furnished to the Assistant Secretary of Defense (Comptroller) and the Assistant Secretary of Defense (Manpower, Personnel, and Reserve) for appropriate action.

T. P. PIKE,
Assistant Secretary of Defense.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
Washington, D. C.

JUNE 15, 1956.

Supply and Logistics

THE DEFENSE STANDARDIZATION PROGRAM FOR FISCAL YEAR 1957

I. GENERAL

This document defines the work to be done by the Departments of the Army, Navy, and Air Force in the defense standardization program for fiscal year 1957. The work defined under the existing phase of the program, attachments A1, A2, and A3, was furnished to this office by the military departments. The work, including schedules, defined under the new phase of the program, attachments B1, B2, and B3, was developed by the program and scheduling committee and was fully coordinated within each military department by the departmental members on this committee.

II. PROGRAM PHASES

Transition from the existing phase to the new phase of the program is being accomplished on a progressive basis, class by class, of the Federal supply classification. Work on this transition began in fiscal year 1956. To a greatly accelerated

degree, this transition will be carried forward during fiscal year 1957. The Military Manual for Standardization M201, dated June 23, 1955 (as revised), establishes the proper sequence of operations for an orderly transition to the new phase of the program.

A. The existing phase includes all projects, initiated or to be initiated, covering new, revised, and amended coordinated and limited coordination documents for which transition to the new phase of the program by Federal supply classes has not been accomplished. Work toward the completion of these projects is to be emphasized during fiscal year 1957. The existing phase of the program will progressively terminate as detailed plans under the new phase are approved. New projects will be initiated and processed whenever the need for such projects arise in accordance with Manuals DSMA M2, M3, M4, M5, and M6 until the applicable FSC detailed plan is approved.

B. The new phase of the program will be conducted in accordance with DOD Directive 4120.3, dated October 15, 1954, and military manuals in the M200 Series. Work on the development and coordination of detailed plans by FSC will be a major effort during fiscal year 1957. Standardization work under approved detailed plans will begin during fiscal year 1957.

C. During fiscal year 1957 and throughout the remainder of the transition period, two sets of procedures will be in effect as stated in the above paragraphs.

III. PROGRAM FOR FISCAL YEAR 1957

A. Existing phase

1. Attachments A1, A2, and A3 contain the numbers of projects to be acted upon during fiscal year 1957, in the manner described therein, for the Army, Navy, and Air Force, respectively.

2. On the next issue of the list of active standardization projects issued by this office, the completion date by month and year will be given for each project. These dates have been furnished by the military departments and are to be considered firm completion dates.

3. Projects assigned for fiscal year 1957 to the medical activities of the Department of Defense will be covered in separate correspondence.

B. New phase

1. Attachments B1, B2, and B3 contain respectively the Army, Navy, and Air Force portions of the defense standardization program for fiscal year 1957 under the new phase. As shown in these attachments, a total of 176 letters of activation will be completed and issued and 83 detailed plans will be completed and submitted to the Standardization Division, OASD (S. & L.) for approval during fiscal year 1957. The issuance of letters of activation signify the assignment of resources to, and commencement of work on, the development of detailed plans by the "assigned" and "participating" military departments. In this connection, it is to be noted that a total of 87 FSC classes are scheduled to be activated during fiscal year 1956 for which resources and work on detailed plans will be required by the three departments during fiscal year 1957. In the development of detailed plans each military department will take cognizance of the provisions of Military Manual M201 concerning the establishment of subassignments for portions of FSC classes based on major supply interests and technical competence. In this connection, reference is made to Assistant Secretary of Defense (S. & L.) memorandum, dated June 2, 1955, wherein specific subassignments were established within FSC classes assigned to the military departments.

2. It is planned that this office will furnish suppemental guidance to the "assigned" department during the development of detailed plans, when appropriate. This office will be able to furnish assistance on those detailed plans wherein considerable standardization planning has been accomplished.

3. Work under the new phase of the program by the medical activities of the Department of Defense will be covered in separate correspondence.

C. Managerial and administrative effort

1. Each military department, in accordance with DOD Directive 4120.3 and Military Manual M201, will provide the required management and administrative support necessary to assure accomplishment of the fiscal year 1957 program hereby established.

2. It is emphasized that the defense standardization program is a joint program in which the three military departments must act in unison on each workload element. Failure on the part of one military department to meet

its assignee and participating responsibilities prevents program attainment by the Department of Defense.

Department of the Army program,[1] fiscal year 1957, existing phase

Activity	Number of current coordinated projects scheduled for completion	Estimated number of new coordinated projects—		Estimated number of limited coordination projects to be completed
		To be initiated	To be completed	
Cml C	30	44	19	52
CE	110	288	122	68
Ord	226	118	80	209
QMC	165	232	98	64
Sig C	195	119	50	208
TC	8	13	6	24
Dept. of Army	29	0	0	0
Total	763	884	375	625

[1] The numbers of projects contained herein cover the Army "preparing activity" program only. In addition, the Army will be required to act as "custodian activity" on 1,294 coordinated projects scheduled for completion during fiscal year 1957 by "preparing activities" of the Navy and Air Force. The Army will be required also to review for interest an estimated 3,603 limited coordination documents to be completed by Navy and Air Force during fiscal year 1957.

Department of the Navy program,[1] fiscal year 1957, existing phase

Activity	Number of current coordinated projects scheduled for completion	Estimated number of new coordinated projects—		Estimated number of limited coordination projects to be completed
		To be initiated	To be completed	
Aer	80	80	61	[2] 500
NOrd	35	50	25	400
Ships	312	463	391	1,075
S. and A	47	86	55	11
Docks	27	48	14	60
MC	0	0	0	12
Total	501	727	546	2,058

[1] The numbers of projects contained herein cover the Navy "preparing activity" program only. In addition, the Navy will be required to act as "custodian activity" on 1,385 coordinated projects scheduled for completion during fiscal year 1957 by "preparing activities" of the Army and Air Force. The Navy will be required also to review for interest an estimated 2,170 limited coordination documents to be completed by Army and Air Force during fiscal year 1957.
[2] Includes an estimated 320 projects to be completed by aeronautical standards group for the Navy.

Department of the Air Force program,[1] fiscal year 1957, existing phase

Activity	Number of current coordinated projects scheduled for completion	Estimated number of new coordinated projects		Estimated number of limited coordination projects to be completed [2]
		To be initiated	To be completed	
Air Force	202	160	45	1,545

[1] The numbers of projects contained herein cover the Air Force "preparing activity" program only. In addition, the Air Force will be required to act as "custodian activity" on 2,185 coordinated projects scheduled for completion during fiscal year 1957 by "preparing activities" of the Army and Navy. The Air Force will be required also to review for interest an estimated 2,673 limited coordination documents to be completed by Army and Navy during fiscal year 1957.
[2] Includes an estimated 320 projects to be completed by the aeronautical standards group for the Air Force.

Department of the Army program,[1] fiscal year 1957, new phase

SUMMARY

Assignee activity	Total classes assigned	Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process [2]
Cml C	9	1	2	1
CE	62	18	3	0
Med	1	0	0	0
Ord	55	38	17	5
QMC	93	25	15	6
Sig C	15	10	3	1
TC	5	0	3	0
Total	240	92	43	13

[1] The above summary covers the Army "assignee" program only. For the Army "participating" program, see the Navy and Air Force "assignee" programs.

[2] Figures in this column include those detailed plans which are scheduled to be under development at the beginning of fiscal year 1957, but which are not scheduled for completion during fiscal year 1957.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process
	Navy	Air Force			
CHEMICAL CORPS					
1040—Chemical weapons	NOrd	WRAMA	Fiscal year 1956	1st quarter	
4230—Decontaminating and impregnating equipment	Docks	Shelby	do	2d quarter	
6640—Laboratory equipment and supplies	NOrd	Gentile	1st quarter	NS	
6850—Miscellaneous chemical specialties	Ships	Topeka	Fiscal year 1956	NS	Yes.
CORPS OF ENGINEERS					
2250—Track materials, rail	Docks	Memphis	do	1st quarter	
2940—Engine air and oil filters	Ships	do	1st quarter	NS	
3740—Pest, disease, control equipment	Docks	Gadsden	4th quarter	NS	
3805—Earth-moving equipment	do	Memphis	do	NS	
3810—Cranes and crane shovels	do	do	do	NS	
3815—Cranes, etc., attachments	do	do	do	NS	
4140—Fan and air circulators	do	Gadsden	3d quarter	NS	
4210—Fire-fighting equipment	do	Shelby	1st quarter	4th quarter	
4310—Compressors and vacuum pumps	Ships	Gadsden	2d quarter	NS	
4320—Power and hand pumps	do	do	do	NS	
5420—Bridges, fixed and float	MC	Shelby	3d quarter	NS	
5510—Lumber	Ships	Topeka	1st quarter	NS	
5530—Plywood and veneer	do	do	do	NS	
5975—Electrical hardware and supplies	Docks	Gentile	3d quarter	NS	
6310—Traffic and transit signal systems	do	MOAMA	do	NS	
6675—Drafting and surveying instruments	do	MAAMA	4th quarter	NS	
7910—Floor polishers and cleaners	S. & A	Topeka	do	NS	
9120—Fuel gases	Docks	MAAMA	1st quarter	4th quarter	
9520—Structural shapes, iron and steel	Ships	Topeka	2d quarter	NS	
ORDNANCE CORPS					
1005—Guns, 30 mm	NOrd	WRAMA	Fiscal year 1956	4th quarter	
1010—Guns, 30 to 75 mm	NOrd	WRAMA	1st quarter	do	
1015—Guns, 75 to 125 mm	NOrd	WRAMA	do	do	
1095—Miscellaneous weapons	NOrd	WRAMA	do	do	
1240—Optical sighting and ranging equipment	NOrd	WRAMA	Fiscal year 1956	NS	Yes.
1290—Miscellaneous fire-control equipment	NOrd	WRAMA	1st quarter	NS	
1305—Ammunition, through 30 mm	NOrd	OOAMA	Fiscal year 1956	NS	Yes.
1310—Ammunition, over 30 mm	NOrd	OOAMA	1st quarter	NS	
1315—Ammunition, 75 to 125 mm	NOrd	OOAMA	do	NS	
1370—Pyrotechnics	NOrd	OOAMA	do	NS	
1375—Explosives	NOrd	OOAMA	do	NS	
1390—Fuses and pruners	NOrd	OOAMA	do	NS	
1395—Miscellaneous ammunition	NOrd	OOAMA	4th quarter	NS	
2310—Passenger motor vehicles	Docks	Memphis	1st quarter	NS	
2320—Trucks and truck tractors	do	do	do	NS	

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS—Continued

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process
	Navy	Air Force			
ORDNANCE CORPS—continued					
2330—Trailers	Docks	Memphis	1st quarter	NS	
2340—Motorcycles, etc	do	do	do	NS	
2350—Tanks, etc	MC	do	do	NS	
2430—Tractors, track-laying	Docks	do	do	NS	
2510—Vehicular, cab, etc	do	do	do	NS	
2520—Vehicular power, etc	do	do	do	NS	
2530—Vehicular brakes, etc	do	do	do	4th quarter	
2540—Vehicular furniture	do	do	2d quarter	NS	
2590—Miscellaneous vehicular components.	do	do	do	NS	
2610—Tires and tubes, etc	do	Shelby	Fiscal year 1956	2d quarter	
2630—Tires, solid	do	do	1st quarter	4th quarter	
2640—Tire rebuilding materials	do	do	do	do	
2805—Gas rec. engines	do	Memphis	Fiscal year 1956	do	
2835—Gas turbines, etc	Ships	do	1st quarter	do	
2910—Engine fuel system components (nonair).	Docks	do	do	3d quarter	
2920—Engine fuel system components (aircraft).	do	do	do	NS	
2930—Engine cooling components	do	do	do	3d quarter	
2990—Miscellaneous engine accessories	do	do	2d quarter	NS	
3635—Glass industries machinery	S. & A	Shelby	1st quarter	3d quarter	
4910—Motor vehicle maintenance equipment.	Docks	Topeka	Fiscal year 1956	NS	Yes.
4930—Lubrication and fuel dispensing equipment.	do	do	1st quarter	NS	
4940—Miscellaneous maintenance and repair equipment.	do	do	do	NS	
5220—Inspection gages	NOrd	Gentile	Fiscal year 1956	NS	Yes.
6220—Electric vehicular lights	Docks	SAAMA	1st quarter	4th quarter	
6650—Optical instruments	Ships	MAAMA	2d quarter	NS	
8030—Preservation compounds	do	Topeka	3d quarter	NS	
9150—Oil and greases	do	MAAMA	1st quarter	4th quarter	
9320—Rubber fabricated materials	do	Shelby	Fiscal year 1956	NS	Yes.
9510—Bars and rod iron and steel	do	Topeka	1st quarter	4th quarter	
9640—Iron and steel primary and semifinished equipment.	NOrd	do	do	NS	
9670—Iron and steel scrap	Ships	do	do	3d quarter	
QUARTERMASTER CORPS					
3510—Laundry and dry-cleaning equipment.	Docks	Memphis	4th quarter	NS	
3520—Shoe repair equipment	Ships	do	3d quarter	NS	
3530—Sewing machines, industrial	do	do	do	NS	
3550—Vending and coin machines	S. & A	do	2d quarter	NS	
3590—Miscellaneous services and trade equipment.	S. & A	do	do	NS	
3605—Food products equipment	S. & A	Shelby	do	NS	
3610—Printing, duplicating equipment	Ships	do	4th quarter	NS	
3615—Pulp and paper machinery	Docks	do	2d quarter	NS	
3640—Tobacco manufacturing machinery.	S. & A	do	do	NS	
3645—Leather tanning machinery	S. & A	do	do	NS	
3695—Miscellaneous special industry	NOrd	do	3d quarter	NS	
3730—Dairy poultry equipment	Docks	Gadsden	2d quarter	NS	
4110—Self-contained refrigeration	do	do	Fiscal year 1956	4th quarter	
6260—Nonelectric, lights fixture	do	Rome	1st quarter	NS	
6670—Scales and balances	Ships	Gentile	2d quarter	NS	
7105—Household furniture	Docks	Gadsden	Fiscal year 1956	4th quarter	
7110—Office furniture	S. & A	do	do	3d quarter	
7125—Cabinets, lockers, etc	Docks	do	do	4th quarter	
7195—Miscellaneous furniture and fixtures.	do	do	do	NS	Yes.
7240—House and com. utility containers	Ships	do	do	3d quarter	
7290—Miscellaneous house and com. furniture.	S. & A	do	do	do	
7310—Food cooking, baking equipment	Ships	Memphis	do	4th quarter	
7320—Kitchen equipment, etc	do	do	do	do	
7330—Kitchen hand tools and utensils	do	do	do	NS	Yes.
7340—Cutlery and flatware	do	do	do	NS	Yes.
7350—Tableware	do	do	do	NS	Yes.
7360—Sets, kits, and outfits, food prep. and serv.	do	do	do	NS	Yes.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS—Continued

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process
	Navy	Air Force			
QUARTERMASTER CORPS—continued					
7420—Billing and computing machines	S. & A	Memphis	Fiscal year 1956	NS	Yes.
7430—Typewriter and computing machines.	S. & A	do	do	3d quarter	
7490—Miscellaneous office machines	S. & A	do	do	do	
7810—Athletic and sporting equipment	S. & A	Shelby	3d quarter	NS	
7930—Cleaning and polishing equipment	Ships	Topeka	do	NS	
8105 Bags and sacks	S. & A	Gadsden	Fiscal year 1956	4th quarter	
8110—Drums and cans	S. & A	do	do	3d quarter	
8510—Perfumes and powders	S. & A	Shelby	do	2d quarter	
8520—Toilet soap, etc	S. & A	do	4th quarter	NS	
8530—Personal toileting articles	S. & A	do	do	NS	
8540—Toiletry paper products	S. & A	do	do	NS	
8720—Fertilizers	Docks	Gadsden	do	NS	
8730—Seeds and nursery stock	do	do	do	NS	
9160—Miscellaneous waxes, oils, fats	Ships	MAAMA	Fiscal year 1956	3d quarter	
9310—Paper and paperboard	Aer	Shelby	do	do	
9430—Miscellaneous crude animal products.	Ships	do	4th quarter	NS	
9440—Miscellaneous crude agricultural products.	do	do	do	NS	
9450—Nonmetallic scrap	do	do	do	NS	
9930—Memorials, etc	BuMed	HQ AMC	do	NS	
SIGNAL CORPS					
5805—Telephone and telegraph equipment.	Ships	Rome	2d quarter	NS	
5815—Teletype, etc., equipment	do	Rome	3d quarter	NS	
5905—Resistors	do	Gentile	Fiscal year 1956	1st quarter	
5940—Lugs, terminals	do	do	1st quarter	3d quarter	
5950—Coils and transformers	do	do	2d quarter	NS	
5955—Piezoelectric crystals	do	do	3d quarter	NS	
5965—Headsets, handsets, etc	do	do	Fiscal year 1956	3d quarter	
5995—Cable, cord, etc., equipment	do	do	3d quarter	NS	
6135—Batteries, primary	do	Rome	2d quarter	NS	
6145—Wire and cable, electrical	do	do	Fiscal year 1956	NS	Yes.
6625—Electrical and electronic test equipment.	do	Gentile	1st quarter	NS	
6710—Cameras, motion picture	Aer	MOAMA	3d quarter	NS	
6740—Photographic, etc., equipment	do	MOAMA	1st quarter	NS	
TRANSPORTATION CORPS					
2210—Locomotives	Docks	Memphis	Fiscal year 1956	1st quarter	
2240—Locomotive, accessories	do	do	do	2d quarter	
3940—Blocks, tackle, etc	Ships	do	do	do	

Department of the Navy program,[1] fiscal year 1957, new phase

SUMMARY

Assignee activity	Total classes assigned	Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process [2]
Aer	7	6	1	0
MC	0	0	0	0
BuMed	0	0	0	0
NOrd	30	22	4	1
Ships	110	26	15	9
S. & A	10	4	2	0
Docks	10	3	1	1
Total	167	61	23	11

[1] The above summary covers the Navy "assignee" program only. For the Navy "participating" program, see the Army and Air Force "assignee" programs.

[2] Figures in this column include those detailed plans which are scheduled to be under development at the beginning of fiscal year 1957, but which are not scheduled for completion during fiscal year 1957.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process
	Navy	Air Force			
BUREAU OF AERONAUTICS					
1530—Aircraft, lighter than air	TC	HQ AMC	3d quarter	NS	
1650—Aircraft hydraulic components	TC	OOAMA	do	NS	
1710—Aircraft arresting and barrier equipment.	TC	Gadsden	do	NS	
1720—Aircraft launching equipment	TC	do	do	NS	
6680—Liquid and gas flow measuring instrument.	CE	MAAMA	do	NS	
6750—Photographic supplies	SigC	ROME	1st quarter	NS	
8040—Adhesives	Ord	TOPEKA	Fiscal year 1956	2d quarter	
BUREAU OF ORDNANCE					
1020—Guns, 125-150 mm	Ord	WRAMA	4th quarter	NS	
1025—Guns, 150-200 mm	Ord	WRAMA	do	NS	
1030—Guns, 200-300 mm	Ord	WRAMA	do	NS	
1035—Guns, over 300 mm	Ord	WRAMA	do	NS	
1045—Launchers, torpedo, etc	Ord	WRAMA	1st quarter	4th quarter	
1055—Launchers, rocket, etc	Ord	WRAMA	3d quarter	NS	
1070—Nets and booms, Ord	TC	WRAMA	1st quarter	4th quarter	
1210—Fire control directors	Ord	WRAMA	do	NS	
1220—Fire control computing sights	Ord	WRAMA	do	NS	
1230—Fire control system, etc	Ord	WRAMA	3d quarter	NS	
1250—Fire control stablizing, etc	Ord	WRAMA	1st quarter	4th quarter	
1320—Ammunition, over 125 mm	Ord	OOAMA	4th quarter	NS	
1325—Bombs	Ord	OOAMA	do	NS	
1340—Rocket and ammunition	Ord	OOAMA	2d quarter	NS	
1350—Underwater mine inert component	Ord	OOAMA	1st quarter	NS	
1351—Underwater mine explosive component.	Ord	OOAMA	2d quarter	NS	
1355—Torpedo inert components	Ord	OOAMA	do	NS	
1356—Torpedo explosive components	Ord	OOAMA	do	NS	
1360—Depth charge inert component	Ord	OOAMA	1st quarter	NS	
1361—Depth charge explosive component.	Ord	OOAMA	2d quarter	NS	
4925—Ammunition Maintenance and repair shop.	Ord	Topeka	do	NS	
5990—Synchros and resolvers	Ord	Gentile	Fiscal year 1956.	2d quarter	
8140—Ammunition boxes, etc	Ord	Gadsden	2d quarter	NS	
9505—Wire, nonelectrical, iron and steel	CE	Topeka	Fiscal year 1956.	NS	Yes.
BUREAU OF SHIPS					
2040—Marine hardware items	TC	MOAMA	3d quarter	NS	
2815—Diesel engine and components	Ord	Memphis	Fiscal year 1956.	NS	Yes.
2825—Steam turbines and components	CE	do	3d quarter	NS	
3110—Bearings, antifriction	Ord	do	Fiscal year 1956.	2d quarter	
3120—Bearings, plain	Ord	do	1st quarter	NS	
3130—Bearings, mounted	Ord	do	Fiscal year 1956.	4th quarter.	
3428—Foundry equipment and supplies	Ord	Gentile	2d quarter	do	
3950—Winches, hoists	CE	Memphis	3d quarter	NS	
4010—Chain and wire rope	TC	Topeka	Fiscal year 1956.	NS	Yes.
4020—Fiber rope	QMC	Shelby	do	3d quarter	
4030—Fittings for repe, cable and chain	TC	do	do	NS	Yes.
4220—Marine lifesaving equipment	TC	do	do	1st quarter	
4450—Industrial fan equipment	CE	Gadsden	3d quarter	NS	
4720—Hose and tubing, etc	Ord	Shelby	1st quarter	4th quarter	
4820—Valves, nonpowered	CE	Moama	do	NS	
5110—Hand tools, edged	Ord	Topeka	do	4th quarter	
5120—Hand tools, nonedged	Ord	do	2d quarter	NS	
5210—Measuring tools, etc	Ord	Gentile	3d quarter	NS	
5330—Packing and gasket materials	Ord	Topeka	1st quarter	NS	
5835—Sound recording, etc	SigC	Rome	3d quarter	NS	
5845—Underwater sound equipment	SigC	do	4th quarter	NS	
5850—Visible and invisible light equipment.	CE	do	Fiscal year 1956.	4th quarter	
5895—Miscellaneous communication equipment.	SigC	Gentile	do	NS	Yes.
5920—Fuses and lightning arrestors	CE	do	1st quarter	NS	
5945—Relays, contactors, etc	SigC	do	do	NS	
5960—Electron tubes	SigC	do	Fiscal year 1956.	4th quarter	
5970—Electrical insulators	SigC	do	2d quarter	NS	
5985—Antennae related equipment	SigC	do	1st quarter	NS	
6105—Motors, electrical	CE	SAAMA	Fiscal year 1956.	NS	Yes.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS—Continued

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process
	Navy	Air Force			
BUREAU OF SHIPS—continued					
6110—Electrical control equipment	CE	Rome	2d quarter	NS	
6115—Generators and generator sets, electrical.	CE	Gadsden	Fiscal year 1956.	NS	Yes.
6140—Batteries, secondary	SigC	do	do	4th quarter	
6210—Indoor and outdoor light fixtures	CE	do	4th quarter	NS	
6240—Electric lamps	CE	Rome	Fiscal year 1956.	NS	Yes.
6250—Ballasts, etc	CE	do	3d quarter	NS	
6605—Navigational instruments	TC	MAAMA	Fiscal year 1956.	NS	Yes.
6665—Hazard-detecting instruments and apparatus.	SigC	SAAMA	do	NS	Yes.
6730—Photographic projection equipment.	SigC	MOAMA	3d quarter	NS	
6840—Pest control agents	QMC	Topeka	Fiscal year 1956.	4th quarter	
7920—Brooms, brushes, etc	QMC	do	do	2d quarter	
8010—Paints, dopes, etc	CE	do	do	3d quarter	
8020—Paints and artists' brushes	CE	do	do	do	
9140—Fuel oils	CE	MAAMA	do	2d quarter	
9330—Plastic fabric materials	SigC	Shelby	1st quarter	NS	
9350—Refractories materials	CE	Shelby	2d quarter	NS	
9515—Plate, sheet, iron and steel	Ord	Topeka	1st quarter	NS	
9925—Ecclesiastical equipment	QMC	Shelby	3d quarter	NS	
BUREAU OF SUPPLIES AND ACCOUNTS					
3930—Warehouse trucks and tractors	QMC	Memphis	1st quarter	NS	
3990—Miscellaneous materials handling equipment.	QMC	do	do	NS	
7230—Draperies, awnings, etc	QMC	Gadsden	4th quarter	NS	
7510—Office supplies	QMC	Memphis	Fiscal year 1956	3d quarter	
7520—Office devices	QMC	do	2d quarter	NS	
8115—Boxes, cartons and crates	QMC	Gadsden	Fiscal year 1956	2d quarter	
BUREAU OF YARDS AND DOCKS					
3825—Road cleaning equipment	CE	Memphis	2d quarter	NS	
3835—Petroleum production and distribution equipment.	CE	do	Fiscal year 1956	NS	Yes.
4510—Plumbing fixtures	CE	Gadsden	3d quarter	NS	
5410—Prefabricated and portable buildings.	CE	Shelby	Fiscal year 1956	4th quarter	
5430—Storage tanks	CE	do	4th quarter	NS	

Department of the Air Force program,[1] fiscal year 1957, new phase

SUMMARY

Assignee activity	Total classes assigned	Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process [2]
Hq AMC	6	0	0	0
MAAMA	8	2	2	2
WRAMA	3	2	1	0
MOAMA	7	4	1	0
OOAMA	7	3	1	0
SAAMA	4	3	1	0
OCAMA	5	2	1	0
Topeka	22	0	6	6
Shelby	5	1	0	0
Rome	1	1	0	0
Memphis	2	2	1	0
Gentile	8	1	2	0
Gadsden	5	2	1	0
SMAMA	1	0	0	0
Total	84	23	17	8

[1] The above summary covers the Air Force "assignee" program only. For the Air Force "participating" program, see the Army and Navy "assignee" programs.

[2] Figures in this column include those detailed plans which are scheduled to be under development at the beginning of fiscal year 1957, but which are not scheduled for completion during fiscal year 1957.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process
	Army	Navy			
MIDDLETOWN AIR MATERIEL AREA (MAAMA)					
1670—Parachutes, etc. equipment	QMC	Aer	3d quarter	NS	
6610—Flight instruments	TC	Aer	Fiscal year 1956	NS	Yes
6615—Automatic pilot mechanisms and gyro components.	TC	Aer	do	NS	Yes
6620—Engine instruments	CE	Aer	do	4th quarter	
6645—Time measuring instrument	Ord	Ships	2d quarter	NS	
9130—Gasoline and jet fuel	Ord	Aer	Fiscal year 1956	2d quarter	
WARNER ROBINS AIR MATERIEL AREA (WRAMA)					
1270—Aircraft gunnery F. C. equipment	Ord	NOrd	2d quarter	NS	
1610—Aircraft propellers	TC	Aer	1st quarter	4th quarter	
MOBILE AIR MATERIEL AREA (MOAMA)					
1660—Aircraft air conditioning, heat, etc.	TC	Aer	3d quarter	NS	
6720—Cameras, still picture	SigC	Aer	2d quarter	NS	
6760—Photographic equipment	SigC	Aer	1st quarter	4th q uarter	
6770—Photo equipment and accessories	SigC	Aer	3d quarter	NS	
OGDEN AIR MATERIEL AREA (OOAMA)					
1620—Landing shock struts	TC	Aer	1st quarter	NS	
1630—Aircraft wheel and brake systems	TC	Aer	3d quarter	NS	
2845—Rocket engines, etc	Ord	Aer	Fiscal year 1956	2d quarter	
6930—Operational training device	TC	Aer	2d quarter	NS	
SAN ANTONIO AIR MATERIEL AREA (SAAMA)					
2915—Engine fuel system component (air).	TC	Aer	2d quarter	NS	
2925—Engine electrical system components (air).	TC	Aer	3d quarter	NS	
6125—Converters, electrical	CE	Ships	1st quarter	4th quarter	
OKLAHOMA CITY AIR MATERIEL AREA (OCAMA)					
2935—Engine coolingsystem component (air).	TC	Aer	1st quarter	do	
2945—Engine and oil filters (air)	TC	Aer	4th quarter	NS	
TOPEKA AIR FORCE DEPOT					
4710—Pipe and tube, metal	CE	Ships	Fiscal year 1956	4th quarter	
4730—Fittings and specialties, hose, etc	CE	do	do	NS	Yes.
5305—Screws	Ord	do	do	4th quarter	
5306—Bolts	Ord	do	do	NS	Yes.
5307—Studs	Ord	do	do	NS	Yes.
5310—Nuts and washers	Ord	do	do	NS	Yes.
5325—Fastening devices	Ord	Aer	do	NS	Yes.
5340—Miscellaneous hardware	CE	Docks	do	NS	Yes.
9525—Wire, nonelectrical, etc	CE	Aer	do	2d quarter	
9530—Bars and rods, etc	Ord	Aer	do	3d quarter	
9535—Plate, sheet, strip, etc	Ord	Aer	do	4th quarter	
9540—Structural shapes, etc	CE	Aer	do	do	
SHELBY AIR FORCE DEPOT					
2620—Tires and tubes (air)	TC	Aer	1st quarter	NS	
ROME AIR FORCE DEPOT					
6660—Meteorological instruments	SigC	Aer	3d quarter	NS	
GADSDEN AIR FORCE DEPOT					
1740—Airfield specialized trucks, etc	Ord	Aer	2d quarter	NS	
4120—Self-contained air conditioning units and accessories.	CE	Ships	do	NS	
8135—Packaging and packing bulk material.	QMC	S. & A	Fiscal year 1956	4th quarter	

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS—Continued

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process
	Navy	Air Force			
MEMPHIS AIR FORCE DEPOT					
2895—Miscellaneous engines and components.	Ord	Aer	1st quarter	4th quarter	
7410—Punched card systems, etc	QMC	S. & A	3d quarter	NS	
GENTILE AIR FORCE DEPOT					
5910—Capacitors	SigC	Ships	Fiscal year 1956	4th quarter	
5930—Switches	CE	do	do	do	
5935—Connectors, electrical	SigC	do	2d quarter	NS	

Exhibit C

Defense Standardization Program for Fiscal Year 1958

Assistant Secretary of Defense,
Washington, D. C., July 3, 1956.

Supply and Logistics
SS

Memorandum for the Assisttant Secretary of the Army (Logistics)
Assistant Secretary of the Navy (Material)
Assistant Secretary of the Air Force (Materiel)

Subject: Defense standardization program—Program for fiscal year 1958

Refs: (a) DOD Directive 4120.3, Subject: Defense Standardization Program dated October 15, 1954
(b) SD memo for Secretaries of Army, Navy and Air Force; Assistant Secretaries of Defense and General Counsel, dated January 25, 1956, Subject: Defense Standardization Program
(c) ASD (S&L) memo for Materiel Secretaries, dated June 15, 1956, Subject: Defense Standardization Program—Program for Fiscal Year 1957

As mentioned in reference (c), there is transmitted herewith as inclosure 1 and its attachments, the defense standardization program for fiscal year 1958. This program for fiscal year 1958 provides for the continuation of work assignments contained in the fiscal year 1957 program transmitted by reference (c). Therefore, the firmness of this fiscal year 1958 program is contingent upon the competition of the fiscal year 1957 program by the military departments.

That portion of the fiscal year 1958 program contained in attachments A1, A2, and A3 was developed, based on data furnished by the Military departments for the fiscal year 1957 program and adjusted to meet the changing program status during fiscal year 1958, as explained in inclosure 1. That portion of the program, including schedules, contained in attachments B1, B2, and B3, was developed by the program and scheduling committee and was coordinated within each military department by the departmental members on this committee. This program for fiscal year 19588 will require additional funds and personnel over those required for fiscal year 1957.

The Secretary of Defense, by reference (b), stated that the defense standardization program is an economy program and, therefore, is to be supported and expedited. Accordingly, this Office, in coordination with the Office of the Assistant Secretary of Defense (Comptroller), is currently preparing budgetary guidance for use by the military departments, in the uniform development of budget estimates for this fiscal year 1958 program. This transmission of this guidance to the military departments is planned for the latter part of July 1956.

In order to expedite its implementation, your personal endorsement of this program for fiscal year 1958 is requested.

R. C. Lanphier, Jr.,
Deputy Assistant Secretary of Defense (Supply and Logistics).

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

Washington 25, D. C.

Supply and Logistics JUNE 29, 1956.

THE DEFENSE STANDARDIZATION PROGRAM FOR FISCAL YEAR 1958

I. GENERAL

This document and its attachments define the work to be done by the Departments of the Army, Navy, and Air Force in the defense standardization program for fiscal year 1958. The work defined under the existing phase of the program, attachments A1, A2, and A3, was developed in the manner explained in paragraph III A2 below. The work, including schedules, defined under the new phase of the program, attachments B1, B2, and B3, was developed by the program and scheduling committee and was fully coordinated within each military department by the departmental members on this committee. Excluded from this document is the fiscal year 1958 program for the medical activities of the Department of Defense which will be covered in separate correspondence.

II. PROGRAM PHASES

Transition from the existing phase to the new phase is being accomplished on a progressive basis as detailed plans for Federal supply classes are approved by the Standardization Division, OASD (S. & L.). A substantial amount of transition will result with the fulfillment of the fiscal year 1957 defense standardization program. A still greater amount of transition is called for in the fiscal year 1958 program. Military Manual for Standardization M201, dated June 23, 1955 (as revised), establishes the proper sequence of operations for this transition to the new phase.

A. The existing phase includes all standardization projects, initiated or to be initiated, covering new, revised, and amended coordinated and limited coordination documents for which transition to the new phase of the program by Federal supply classes has not been accomplished. Work on the initiation and completion of these projects will continue during fiscal year 1958. The workload under the existing phase of the program will be reduced in fiscal year 1958 because of the transfer of projects to the new phase as detailed plans are approved. Until the applicable FSC detailed plans are approved, new projects will continue to be initiated and processed under the existing phase whenever the need for such projects arise. The processing of these projects will be in accordance with Manuals DSMA M2, M3, M4, M5, and M6.

B. There are two principal standardization efforts associated with the new phase of the program. The first effort is the comprehensive planning and scheduling of standardization project workloads on an FSC class basis. In this effort, one of the military departments has the assigned responsibility for the development or revision of detailed plans and the other two departments have participating responsibility. The second effort is the accomplishment of the standardization project workload contained in the approved detailed plans. Each of the three military departments will normally contribute toward this accomplishment, with the assigned department having responsibility for monitoring and reporting of accomplishments. During fiscal year 1958, and thereafter, the second effort will become the predominant effort. The new phase of the program will be conducted in accordance with DOD Directive 4120.3, dated October 15, 1954, and Military Manuals in the M200 series.

C. During fiscal year 1958 and throughout the remainder of the transition period, two sets of procedures will be in effect as stated in the above paragraphs.

III. PROGRAM FOR FISCAL YEAR 1958

A. Existing phase

1. Attachments A1, A2, and A3 contain the number of projects to be acted upon during fiscal year 1958, in the manner described therein, by the Army, Navy, and Air Force, respectively.

2. Work under the existing phase will progressively decrease as more and more detailed plans are approved. During fiscal year 1958 a significant decrease in

project workload under the existing phase should occur as a result of the approval of detailed plans in fiscal year 1957 and fiscal year 1958. The numbers of projects to be acted upon under the existing phase during fiscal year 1958 was developed by utilizing similar data furnished by the military departments for the fiscal year 1957 program, and adjusting this data downward, based on the number of approved detailed plans in effect, in order to account for the transfer of projects to the new phase.

3. The list of active standardization projects issued quarterly by this office will contain a current record of completion dates by month and year for all projects under the existing phase. These dates will be coordinated with the "preparing" activities of military departments and are to be considered firm completion dates.

B. New phase

1. Attachments B1, B2, and B3 contain respectively the Army, Navy, and Air Force portions of the defense standardization program for fiscal year 1958 covering the scheduled completion of letters of activation and detailed plans. The standardization effort required to accomplish the project workload under approved detailed plans obviously cannot be defined in this document. At such time as the detailed plans are developed, coordinated, and approved, full definition of this project workload under the new phase for each FSC class will be available. As shown on these attachments, a total of 50 letters of activation will be completed and issued by the "assignee" activities and 145 detailed plans will be completed through the joint efforts of the "assigned" and "participating" military departments and submitted to the Standardization Division for approval. In addition, 85 detailed plans will be in process of development during fiscal year 1958, but not scheduled for completion until after fiscal year 1958.

2. The issuance of the letter of activation signifies the assignment of resources to, and the commencement of work on, the development of the detailed plan by the "assigned" and "participating" departments. Work on the 85 detailed plans in process of development during fiscal year 1958, but not scheduled for completion until after fiscal year 1958, will proceed at a similar level of effort as for those plans scheduled for completion.

3. The standardization effort required to accomplish project workload under approved detailed plans will become the major effort under the new phase during fiscal year 1958. As scheduled, work under 84 approved detailed plans will be in effect at the beginning of fiscal year 1958 with an additional 145 detailed plans becoming effective during fiscal year 1958. It has been estimated that approximately 75 percent of the total standardization effort for the new phase of the program in fiscal year 1958 will be devoted to accomplishing the project workload under approved detailed plans.

4. The standardization effort required to develop and coordinate the annual revisions to approved detailed plans will become a significant effort during fiscal year 1958. Annual revisions will be required for the 84 approved detailed plans that will be in effect at the beginning of fiscal year 1958. The responsibility for the completion of these revisions is the same as the responsibility for the completion of the original detailed plans.

5. It is planned that this office will continue to furnish supplemental guidance to the "assigned" department during the development of detailed plans, when appropriate. This office will be able to furnish assistance on those detailed plans wherein considerable standardization planning has been accomplished.

C. Managerial and administrative effort

1. Each military department, in accordance with DOD Directive 4120.3 and Military Manual M201, will provide the required management and administrative support necessary to assure accomplishment of the fiscal year 1958 program hereby established.

2. It cannot be overemphasized that the defense standardization program is a joint program in which the three military departments must act in unison on each workload element. Failure on the part of one military department to meet its assignee and participating responsibilities prevents program attainment by the Department of Defense.

Department of the Army program,[1] fiscal year 1958, existing phase

Activity	Number of current coordinated projects scheduled for completion	Estimated number of new coordinated projects—		Estimated number of limited coordination projects to be completed
		To be initiated	To be completed	
CmlC	22	32	14	38
CE	81	212	90	50
Ord	167	138	59	154
QMC	121	170	72	47
SigC	144	88	37	153
TC	6	10	4	18
Department of Army	21	0	0	0
Total	562	650	276	460

[1] The numbers of projects contained herein for the existing phase cover the Army "preparing activity" program only. In addition, the Army will be required to act as "custodian activity" on 953 coordinated projects scheduled for completion during fiscal year 1958 by "preparing activities" of the Navy and Air Force. The Army will be required also to review for interest an estimated 2,651 limited coordination documents to be completed by Navy and Air Force during fiscal year 1958.

NOTE.—The explanation for the reduction in project workload under the existing phase for the fiscal year 1958 program is given in enclosure 1.

Department of the Navy program,[1] fiscal year 1958, existing phase

Activity	Number of current coordinated projects scheduled for completion	Estimated number of new coordinated projects—		Estimated number of limited coordination projects to be completed
		To be initiated	To be completed	
Aer	59	59	45	[2] 368
NOrd	26	37	18	294
Ships	230	341	288	791
S. & A	34	63	41	8
Docks	20	35	10	44
MC	0	0	0	9
Total	369	535	402	1,514

[1] The numbers of projects contained herein for the existing phase cover the Navy "preparing activity" program only. In addition, the Navy will be required to act as "custodian activity" on 1,020 coordinated projects scheduled for completion during fiscal year 1958 by "preparing activities" of the Army and Air Force. The Navy will be required also to review for interest an estimated 1,597 limited coordination documents to be completed by Army and Air Force during fiscal year 1958.

[2] Includes an estimated 235 projects to be completed under the existing phase by aeronautical standards group for the Navy.

NOTE.—The explanation for the reduction in project workload under the existing phase for the fiscal year 1958 program is given in enclosure 1.

Department of the Air Force program,[1] fiscal year 1958, existing phase

Activity	Number of current coordinated projects scheduled for completion	Estimated number of new coordinated projects—		Estimated number of limited coordination projects to be completed
		To be initiated	To be completed	
Air Force	149	118	33	[2] 1,137

[1] The numbers of projects contained herein for the existing phase cover the Air Force "preparing activity" program only. In addition, the Air Force will be required to act as "custodian activity" on 1,609 coordinated projects scheduled for completion during fiscal year 1958 by "preparing activities" of the Army and Navy. The Air Force will be required also to review for interest an estimated 1,974 limited coordination documents to be completed by Army and Navy during fiscal year 1958.

[2] Includes an estimated 235 projects to be completed under the existing phase by the aeronautical standards group for the Air Force.

NOTE.—The explanation for the reduction in project workload under the existing phase for the fiscal year 1958 program is given in inclosure 1.

Department of the Army program,[1] fiscal year 1958, new phase

SUMMARY

Assignee activity	Total classes assigned	Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process [2]
Cml C	9	2	3	1
CE	62	17	19	14
Med	1	0	0	0
Ord	55	2	18	13
QMC	93	0	25	6
Sig C	15	0	8	2
TC	5	1	1	0
Total	240	22	74	36

[1] The above summary covers the Army "assignee" program only. For the Army "participating" program, see the Navy and Air Force "assignee" programs.

[2] Figures in this column include those detailed plans which are scheduled to be under development during all or a portion of fiscal year 1958 (as a result of prior completion of letters of activiaton), but which are not scheduled for completion during fiscal year 1958.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion
	Navy	Air Force		
CHEMICAL CORPS				
6630—Chemical analysis instruments	NOrd	Gentile	1st quarter	NS.
6820—Dyes	Ships	Topeka	2d quarter	4th quarter.
6640—Laboratory equipment and supplies	NOrd	Gentile	Fiscal year 1957	1st quarter.
6850—Miscellaneous chemical specialties	Ships	Topeka	Fiscal year 1956	Do.
CORPS OF ENGINEERS				
1080—Camouflage and deception equipment	do	WRAMA	1st quarter	3d quarter.
2230—Right-of-way construction and maintenance equipment.	Docks	Memphis	4th quarter	NS.
2410—Tractors, full track	do	do	1st quarter	3d quarter.
2420—Tractors, wheeled	do	do	2d quarter	4th quarter.
2940—Engine air and oil filters, etc. (nonaircraft).	Ships	do	Fiscal year 1957	3d quarter.
3020—Gears, pulleys, etc	do	Topeka	3d quarter	NS.
3740—Pest, disease, etc., equipment	Docks	Gadsden	Fiscal year 1957	2d quarter.
3750—Gardening tools	do	do	2d quarter	4th quarter.
3805—Earth-moving equipment	do	Memphis	Fiscal year 1957	NS.
3810—Crane and crane shovels	do	do	do	3d quarter.
3815—Crane and shovel attachments	do	do	do	Do.
3830—Truck and tractor attachments	do	do	3d quarter	NS.
4140—Fans and air circulators	do	do	Fiscal year 1957	1st quarter.
4240—Safety and rescue equipment	Ships	Shelby	4th quarter	NS.
4310—Compressors and vacuum pumps	do	Gadsden	Fiscal year 1957	2d quarter.
4320—Power and hand pumps	do	do	do	4th quarter.
5420—Bridges, fixed and floating	MC	Shelby	do	2d quarter.
5510—Lumber	Ships	Topeka	do	1st quarter.
5520—Millwork	Docks	do	3d quarter	NS.
5530—Plywood and veneer	Ships	do	Fiscal year 1957	3d quarter.
5620—Building glass, etc	Docks	do	3d quarter	NS.
5640—Wallboard, etc	do	do	4th quarter	NS.
5975—Electrical hardware and supplies	do	Gentile	Fiscal year 1957	NS.
6310—Traffic signal systems	do	MOAMA	do	2d quarter.
6330—Railroad signal devices	do	MOAMA	3d quarter	NS.
6350—Miscellaneous alarm systems	Ships	MOAMA	do	NS.
6675—Drafting, surveying, etc., instruments	Docks	MAAMA	Fiscal year 1957	4th quarter.
6830—Gases, compressed, etc	Ships	Topeka	3d quarter	NS.
7910—Floor polishes and vacuum cleaners	S. & A	do	Fiscal year 1957	2d quarter.
8120—Gas cylinders	Ships	MAAMA	2d quarter	NS.
9110—Fuels, solid	Docks	MAAMA	1st quarter	3d quarter.
9520—Structural shapes, iron and steel	Ships	Topeka	Fiscal year 1957	2d quarter.
9905—Signs, displays, etc	Docks	Shelby	4th quarter	NS.

See note at end of table, p. 228.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS—Continued

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion
	Navy	Air Force		
ORDNANCE CORPS				
1240—Optical sighting equipment	NOrd	WRAMA	Fiscal year 1956	4th quarter.
1290—Miscellaneous fire-control equipment	NOrd	WRAMA	Fiscal year 1957	2d quarter.
1305—Ammunition, through 30 mm	NOrd	OOAMA	Fiscal year 1956	Do.
1310—Ammunition, over 30 mm	NOrd	OOAMA	Fiscal year 1957	NS.
1315—Ammunition, 75 to 125 mm	NOrd	OOAMA	do	NS.
1330—Grenades	MC	OOAMA	1st quarter	NS.
1345—Land mines	MC	OOAMA	do	NS.
1370—Pyrotechnics	NOrd	OOAMA	Fiscal year 1957	NS.
1375—Explosives	NOrd	OOAMA	do	NS.
1390—Fuses and primers	NOrd	OOAMA	do	NS.
1395—Miscellaneous ammunition	NOrd	OOAMA	do	NS.
2310—Passenger motor vehicles	Docks	Memphis	do	1st quarter.
2320—Trucks and truck tractors	do	do	do	2d quarter.
2330—Trailers	do	do	do	3d quarter.
2340—Motorcycles, etc	do	do	do	2d quarter.
2350—Tanks and self-propelled weapons	MC	do	do	Do.
2430—Tractors, track laying	Docks	do	do	4th quarter.
2510—Vehicular cab, etc	do	do	do	NS.
2520—Vehicular power transportation components.	do	do	do	NS.
2540—Vehicular furniture	do	do	do	NS.
2590—Miscellaneous vehicular components	do	do	do	NS.
2920—Engine electrical system components (nonaircraft).	do	do	do	1st quarter.
2990—Miscellaneous engine accessories (nonaircraft).	do	do	do	3d quarter.
4910—Motor vehicle maintenance, etc., equipment.	do	Topeka	Fiscal year 1956	4th quarter.
4930—Lubrication and fuel dispensing equipment.	do	do	Fiscal year 1957	2d quarter.
4940—Miscellaneous maintenance equipment	do	do	do	3d quarter.
5220—Inspection gages	NOrd	Gentile	Fiscal year 1956	1st quarter.
6650—Optical instruments	Ships	MAAMA	Fiscal year 1957	2d quarter.
8030—Preservative, etc., compounds	do	Topeka	do	4th quarter.
9320—Rubber fabricated materials	do	Shelby	Fiscal year 1956	3d quarter.
9640—Iron and steel primary and semifinished equipment.	NOrd	Topeka	Fiscal year 1957	NS.
QUARTERMASTER CORPS				
3510—Laundry and dry-cleaning equipment	Docks	Memphis	do	4th quarter.
3520—Shoe-repairing equipment	Ships	do	do	NS.
3530—Sewing machines, ind	do	do	do	NS.
3550—Vending machines	S. & A	do	do	2d quarter.
3590—Miscellaneous service and trade equipment.	S. & A	do	do	NS.
3605—Food products equipment	do	Shelby	do	2d quarter.
3610—Printing, etc., equipment	Ships	do	do	4th quarter.
3615—Pulp and paper machinery	Docks	do	do	3d quarter.
3640—Tobacco manufacturing machinery	S. & A	do	do	2d quarter.
3645—Leather tanning machinery	do	do	do	Do.
3695—Miscellaneous special industry machinery.	MOrd	do	do	NS.
3730—Dairy, poultry, etc., equipment	Docks	Gadsden	do	3d quarter.
6260—Nonelectric lighting fixtures	do	Rome	do	2d quarter.
6670—Scales and balances	Ships	Gentile	do	Do.
7195—Miscellaneous furniture, etc	Docks	Gadsden	Fiscal year 1956	1st quarter.
7330—Kitchen tools, etc	Ships	Memphis	do	Do.
7340—Cutlery and flatware	do	do	do	3d quarter.
7350—Tableware	do	do	do	4th quarter.
7360—Sets, etc., food prep., etc	do	do	do	2d quarter.
7420—Billing and computing machines	S. & A	do	do	NS.
7810—Athletics and sporting equipment	do	Shelby	Fiscal year 1957	3d quarter.
7930—Cleaning and polishing compounds	do	Topeka	do	NS.
8520—Toilet soap, etc	do	Shelby	do	4th quarter.
8530—Personal toiletry, etc	MC	do	do	Do.
8540—Toiletry paper products	S. & A	do	do	Do.
8720—Fertilizers	Docks	Gadsden	do	Do.
8730—Seeds and nursery stock	do	do	do	Do.
9430—Miscellaneous crude animal products	Ships	Shelby	do	Do.
9440—Miscellaneous crude agricultural products.	do	do	do	Do.
9450—Nonmetallic, scrap	do	do	do	Do.
9930—Memorials, etc., equipment	BuMed	Hq AMC	do	Do.

See note at end of table, p. 228.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS—Continued

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion
	Navy	Air Force		
SIGNAL CORPS				
5805—Telephone, etc., equipment	Ships	Rome	Fiscal year 1957	2d quarter.
5815—Teletype, etc., equipment	do	do	do	4th quarter.
5950—Coils and transformers	do	Gentile	do	2d quarter.
5955—Piezoelectric crystals	do	do	do	Do.
5995—Cable, etc., communication equipment	do	do	do	NS.
6135—Batteries, primary	do	Rome	do	1st quarter.
6145—Wire and cable, electric	do	do	do	NS.
6625—Electric and electronic installations	do	Gentile	do	2d quarter.
6710—Cameras, motion picture	BuAer	MOAMA	do	Do.
6740—Photographic developing, etc., equipment.	BuAer	MOAMA	do	3d quarter.
TRANSPORTATION CORPS				
1955—Dredges	Docks	Mobile	1st quarter	4th quarter.

NOTE.—NS: Detailed plan not scheduled for completion during fiscal year 1958. (Work on development of detailed plans is scheduled to begin with the completion of letters of activation.)

Department of the Navy program,[1] fiscal year 1958, new phase

SUMMARY

Assignee activity	Total classes assigned	Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process [2]
Aer	7	0	2	4
NOrd	30	1	16	5
Ships	110	9	22	19
S. & A	10	0	3	1
Docks	10	3	4	3
Total	167	13	47	32

[1] The above summary covers the Navy "assignee" program only. For the Navy "participating" program, see the Army and Air Force "assignee" programs.

[2] Figures in this column include those detailed plans which are scheduled to be under development during all or a portion of fiscal year 1958 (as a result of prior completion of letters of activation), but which are not scheduled for completion during fiscal year 1958.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion
	Army	Air Force		
BUREAU OF AERONAUTICS				
1530—Aircraft, lighter than air	TC	Hq AMC	Fiscal year 1957	4th quarter.
1650—Aircraft hydraulic components	TC	OOAMA	do	NS.
1710—Aircraft arresting and barrier equipment.	TC	Gadsden	do	NS.
1720—Aircraft launching equipment	TC	do	do	NS.
6680—Liquid and gas flow measuring instrument.	CE	MAAMA	do	NS.
6750—Photographic supplies	Sig C	Rome	do	1st quarter.
BUREAU OF ORDNANCE				
1020—Guns, 125–150 mm	Ord	WRAMA	do	3d quarter.
1025—Guns, 150–200 mm	Ord	WRAMA	do	Do.
1030—Guns, 200–300 mm	Ord	WRAMA	do	Do.
1035—Guns, over 300 mm	Ord	WRAMA	do	Do.
1055—Launchers, rocket, etc	Ord	WRAMA	do	4th quarter.
1210—Fire-control directors	Ord	WRAMA	do	1st quarter.
1220 Fire-control computing sights	Ord	WRAMA	do	NS.
1230—Fire-control systems	Ord	WRAMA	do	NS.
1260—Fire-control designating and indicating equipment.	Ord	WRAMA	4th quarter	NS.
1320—Ammunition, over 125 mm	Ord	OOAMA	Fiscal year 1957	3d quarter.

See footnote at end of table, p. 229.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS—Con.

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion
	Army	Air Force		
BUREAU OF ORDNANCE—continued				
1325—Bombs	Ord	OOAMA	Fiscal year 1957	3d quarter.
1340—Rockets and ammunition	Ord	OOAMA	do	1st quarter.
1350—Underwater mine inert components	Ord	OOAMA	do	4th quarter.
1351—Underwater mine explosive components.	Ord	OOAMA	do	Do.
1355—Torpedo inert components	Ord	OOAMA	do	NS.
1356—Torpedo explosive components	Ord	OOAMA	do	NS.
1360—Depth charge inert components	Ord	OOAMA	do	4th quarter.
1361—Depth charge explosive components	Ord	OOAMA	do	Do.
4925—Ammunition maintenance, etc., equipment.	Ord	Topeka	do	2d quarter.
8140—Ammunition boxes and containers	Ord	Gadsden	do	1st quarter.
9505—Wire, nonelectrical, iron, etc	CE	Topeka	Fiscal year 1956	Do.
BUREAU OF SHIPS				
2020—Rigging and rigging gear	TC	MOAMA	1st quarter	4th quarter.
2040—Marine hardware items	TC	MOAMA	Fiscal year 1957	3d quarter.
2090—Miscellaneous ship and marine equipment.	CE	MOAMA	1st quarter	NS.
2815—Diesel engines and components	Ord	Memphis	Fiscal year 1956	3d quarter.
2825—Steam turbines and components	CE	do	Fiscal year 1957	NS.
3120—Bearings, plain, unmounted	Ord	do	do	NS.
3450—Machine tools, portable	Ord	Gentile	2d quarter	NS.
3455—Cutting tools for machine tools	Ord	do	3d quarter	NS.
3950—Winches, hoists, etc	CE	Memphis	Fiscal year 1957	NS.
4010—Chain and wire rope	TC	Topeka	Fiscal year 1956	4th quarter.
4030—Fittings for rope, etc	TC	do	do	NS.
4130—Refrigerating and air-conditioning plants.	CE	Gadsden	1st quarter	NS.
4450—Industrial fan, etc., equipment	CE	do	Fiscal year 1957	4th quarter.
4820—Valves, nonpowered	CE	MOAMA	do	NS.
5210—Measuring tools, etc	Ord	Gentile	do	3d quarter.
5330—Package and gasket materials	Ord	Topeka	do	NS.
5835—Sound recording, etc	Sig C	Rome	do	NS.
5845—Underwater sound equipment	Sig C	do	do	NS.
5120—Handtools	Ord	Topeka	do	1st quarter.
5895—Miscellaneous communication equipment.	SigC	Gentile	Fiscal year 1956	3d quarter.
5920—Fuses and lightning arrestors	CE	do	Fiscal year 1957	1st quarter.
5925—Circuit breakers	CE	do	3d quarter	NS.
5945—Relays contactors, etc	SigC	do	Fiscal year 1957	NS.
5970—Electrical insulators, etc	SigC	do	do	4th quarter.
5977—Electric contact brushes, etc	CE	do	2d quarter	NS.
5985—Antennas, etc., related equipment	SigC	do	Fiscal year 1957	2d quarter.
6105—Motors, electrical	CE	SAAMA	Fiscal year 1956	4th quarter.
6110—Electric control equipment	CE	Rome	Fiscal year 1957	NS.
6115—Generators and sets, electric	CE	Gadsden	Fiscal year 1956	2d quarter.
6130—Rectifying equipment, electric	CE	Rome	1st quarter	NS.
6210—Indoor and outdoor electric light fixtures.	CE	do	Fiscal year 1957	4th quarter.
6240—Electric lamps	CE	do	Fiscal year 1956	1st quarter.
6250—Ballasts, etc	CE	do	Fiscal year 1957	3d quarter.
6605—Navigational instruments	TC	MAAMA	Fiscal year 1956	1st quarter.
6665—Hazard-detecting instruments and apparatus.	SigC	SAAMA	do	3d quarter.
6730—Photographic projecting equipment	SigC	MOAMA	Fiscal year 1957	NS.
9330—Plastic fabricated materials	SigC	Shelby	do	2d quarter.
9350—Refractories materials	CE	do	do	2d quarter.
9390—Miscellaneous fabricated nonmetallic materials.	CE	do	1st quarter	NS.
9515—Plate, sheet, iron and steel	Ord	Topeka	Fiscal year 1957	1st quarter.
9925—Ecclesiastical equipment	QMC	Shelby	do	1st quarter.
BUREAU OF SUPPLIES AND ACCOUNTS				
3930—Warehouse trucks and tractors	QMC	Memphis	do	1st quarter.
3990—Miscellaneous material handling equipment.	QMC	do	do	NS.
7230—Draperies, awnings, etc	QMC	Gadsden	do	2d quarter.
7520—Office devices, etc	QMC	Memphis	do	1st quarter.
BUREAU OF YARDS AND DOCKS				
1945—Pontoons and floating docks	TC	MOAMA	2d quarter	NS.
1950—Floating drydocks	TC	MOAMA	3d quarter	NS.
3825—Road-clearing equipment	CE	Memphis	Fiscal year 1957	2d quarter.
3835—Petroleum production and distribution equipment.	CE	do	Fiscal year 1956	Do.
4510—Plumbing fixtures, etc	CE	Gadsden	Fiscal year 1957	3d quarter.
5430—Storage tanks	CE	Shelby	do	4th quarter.
7220—Floor coverings	QMC	Gadsden	4th quarter	NS.

NOTE.—NS: Detailed plan not scheduled for completion during fiscal year 1958. (Work on development of detailed plans is scheduled to begin with the completion of letters of activation.)

Department of the Air Force program,[1] fiscal year 1958, new phase

Assignee activity	Total classes assigned	Letters of activation scheduled for completion	Detailed plans scheduled for completion	Detailed plans in process [2]
Hq AMC	6	2	0	2
SMAMA	1	0	0	0
MAAMA	8	1	4	1
WRAMA	3	1	1	1
MOAMA	7	1	3	1
OOAMA	7	1	3	1
SAAMA	4	0	2	0
OCAMA	5	1	1	1
Topeka	22	5	4	7
Shelby	5	0	1	0
Rome	1	0	1	0
Gadsden	5	1	2	1
Memphis	2	0	1	0
Gentile	8	2	1	2
Total	84	15	24	17

[1] The above summary covers the Air Force "assignee" program only. For the Air Force "participating" program, see the Army and Navy "assignee" programs.

[2] Figures in this column include those detailed plans which are scheduled to be under development during all or a portion of fiscal year 1958 (as a result of prior completion of letters of activation), but which are not scheduled for completion during fiscal year 1958.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion
	Army	Navy		
AIR MATERIEL COMMAND				
1520—Aircraft, rotary wing	TC	Aer	4th quarter	NS.
1540—Gliders	TC	Aer	2d quarter	NS.
MIDDLETOWN AIR MATERIEL AREA				
1670—Parachutes, etc., equipment	QMC	Aer	Fiscal year 1957	4th quarter.
6610—Flight instruments	TC	Aer	Fiscal year 1956	2d quarter.
6615—Automatic pilot mechanisms and gyro components.	TC	Aer	do	1st quarter.
6645—Time-measuring instruments	Ord	Ships	Fiscal year 1957	3d quarter.
6685—Pressure, temperature, etc., instruments.	Sig C	Aer	2d quarter	NS.
WARNER ROBINS AIR MATERIEL AREA				
1270—Aircraft gunnery, etc., components	Ord	NOrd	Fiscal year 1957	3d quarter.
1280—Aircraft bombing, etc., components	Ord	NOrd	3d quarter	NS.
MOBILE AIR MATERIEL AREA				
1660—Aircraft, air condenser, heat, etc., equipment.	TC	Aer	Fiscal year 1957	4th quarter.
6720—Camems, still picture	Sig C	Aer	do	1st quarter.
6770—Film processed	Sig C	Aer	do	3d quarter.
6780—Photographic sets, etc	Sig C	Aer	2d quarter	NS.
OGDEN AIR MATERIEL AREA				
1620—Landing shock struts	TC	Aer	Fiscal year 1957	1st quarter.
1630—Aircraft wheels and brake systems	TC	Aer	do	3d quarter.
6910—Training aids	Sig C	Aer	1st quarter	NS.
6930—Operational training devices	Eng	Aer	Fiscal year 1957	2d quarter.
SAN ANTONIO AIR MATERIEL AREA				
2915—Engine fuel system components (air)	TC	Aer	do	3d quarter.
2925—Engine electrical system components (air).	TC	Aer	do	4th quarter.
OKLAHOMA CITY AIR MATERIEL AREA				
2945—Engine and oil filters (air)	TC	Aer	do	do.
2950—Turbosuperchargers		Aer	3d quarter	NS.

See note at end of table, p. 231.

SCHEDULE OF FEDERAL SUPPLY CLASSES BY FISCAL YEAR QUARTERS—Con.

FSC class and brief title	Participating activities		Letters of activation scheduled for completion	Detailed plans scheduled for completion
	Army	Navy		
TOPEKA AIR FORCE DEPOT				
4730—Fittings, hose, pipe and tool	CE	Ships	Fiscal year 1956	1st quarter.
5306—Bolts	Ord	do	do	2d quarter.
5307—Studs	Ord	do	do	NS.
5310—Nuts and washers	Ord	do	do	4th quarter.
5315—Nails, keys and pins	CE	S. & A	1st quarter	NS.
5325—Fastening devices	Ord	Aer	Fiscal year 1956	NS.
5340—Miscellaneous hardware	CE	Docks	do	4th quarter.
5355—Knobs and pointers	Ord	Ships	2d quarter	NS.
9620—Minerals, natural and synthetic	CE	do	do	NS.
9630—Additive metal materials, etc	Ord	Aer	1st quarter	NS.
9660—Precious metals—primary forms	QMC	Ships	do	NS.
SHELBY AIR FORCE DEPOT				
2620—Tires and tubes (aircraft)	TC	Aer	Fiscal year 1957	2d quarter.
ROME AIR FORCE DEPOT				
6660—Meteorological instruments	SigC	Aer	do	4th quarter.
GADSDEN AIR FORCE DEPOT				
1730—Aircraft ground service equipment	TC	Aer	1st quarter	NS.
1740—Airfield specialized trucksets	Ord	Aer	Fiscal year 1957	3d quarter.
4120—Self-contained air-conditioning units, etc.	CE	Ships	do	Do.
MEMPHIS AIR FORCE DEPOT				
7410—Punched card system machines	QMC	S&A	do	Do.
GENTILE AIR FORCE DEPOT				
5915—Filters and networks	SigC	Ships	1st quarter	NS.
5935—Connectors, electrical	SigC	do	Fiscal year 1957	3d quarter.
6695—Combination and miscellaneous instruments.	CE	Aer	2d quarter	NS.

NOTE.—NS: Detailed plan not scheduled for completion during fiscal year 1958. (Work on development of detailed plans is scheduled to begin with the completion of letters of activation.)

EXHIBIT D

SEMIANNUAL REPORT—TEXTILES AND APPAREL

SECTION I. INTRODUCTION

1. This report is rendered by OQMG, DA, as DOD standardization assignee, as of December 20, 1956, in accordance with standardization program: Textiles and subsistence (F. S. C. 7210, 83, 84 and 89), January 4, 1956.

SECTION II. SIMPLIFICATION ACCOMPLISHMENTS

1. The following simplification projects were completed during the 6-month period of this report (June 21, 1956, to December 20, 1956):

Project No.	F. S. C.	Title	Target date	Actual completion date
601-8	8425	Underwear and nightwear, women's	June 1957	November 1956.
601-9	8430	Footwear, men's	August 1956	September 1956.
601-10	8435	Footwear, women's	January 1957	Do.
601-11	8440	Hosiery, handwear and clothing accessories, men's.	August 1956	August 1956.
601-12	8445	Hosiery, handwear and clothing accessories, women's.	October 1956	September 1956.
601-15	8465	Individual equipment	do	November 1956.

2. Tabulation of results for F. S. C. classes for simplification projects completed in this reporting period:

	Federal Supply Catalog						
	8425	8430	8435	8440	8445	8465	Total
Total items in Federal catalog	34	5,811	2,068	549	190	471	9,123
Items standardized for future procurement, if supported in formal coordination	22	2,791	1,034	286	198	169	4,500
Items indicated for procurement that were eliminated	0	403	125	14	23	36	601
New items adopted to replace eliminated items	0	0	125	0	31	0	156
Extension projects established	0	2	0	4	3	3	12
Specification projects established	0	3	0	5	1	2	11
Limitation standard projects established	1	1	1	1	1	1	6

3. Tabulation of results for F. S. C. classes for simplification projects completed prior to this reporting period:

	Federal Supply Catalog		
	7210	8340 [1]	Total
Total end items in Federal catalog	177	380	557
Items standardized for future procurement	93	101	194
Items eliminated	84	279	363
Extension projects established	0	4	4
Specification projects established	0	2	2
Limitation standard projects established	1	1	2

[1] Simplification of this F. S. C. covered tents and tarpaulin end items only. Other end items will be simplified in the near future.

SECTION III. SELECTED ITEMS AND EXTENSON PROJECTS

1. The following established selected items and extension projects were initiated on the dates indicated; copies of the current reports from the project monitoring agencies on those projects where work has been done are furnished as attachments 1 through 14. In view of the recent establishments of those projects indicated by an asterisk (*), no report is submitted.

Type	Project No.	Title	Date initiated
Selected item	Q-SI-8305-1	Duck and webbing	September 1951.
Selected item	Q-SI-8305-2	Coated fabrics	October 1952.
Selected item	Q-SI-8415-1	Armor, body	May 1955.
Extension	Q-E-8340-2	Ropes, loops, and grommets	May 1954.
Extension	Q-E-8340-3	Study of hatch-type tents	September 1954.
Extension	Q-E-8340-7	Study of shelter half tents	Do.
Extension	Q-E-8430/35-1	Shoe lasts and footwear	February 1955.
Extension	609-30	Boot, fireman	September 1956.
Extension	608-50	Handkerchief, man's	August 1956.
Extension	608-101	Hardware for leather accessories, M. P	Do.
Extension	608-49	Scarves, neckwear, men's and women's	Do.
Extension	*611-8	Socks, men's, cotton	November 1956.
Extension	*611-82	Gloves, cloth, dress, women's	December 1956.
Extension	608-106	Stockings, women's, nylon	August 1956.
Extension	608-142	Handbag, woman's	Do.
Extension	*611-73	Pocket ammunition magazine	November 1956.
Extension	*611-74	Glasses, goggles, and components	Do.
Extension	*611-75	Rucksack	Do.
Packaging	Q-P-83/84/7105 (mattresses only)/ 7210-1.	Packaging and standardization of textiles, apparel, and related items.	December 1954.

2. In connection with the packaging project, drafts of limitation standards as listed in section V below have been furnished the task group at the same time the limitation standards were placed in coordination. This permits packaging standardization studies to begin immediately after the simplification review.

SECTION IV. SPECIFICATION PROJECTS

1. The following specification projects have been established as the result of simplification:

F. S. C.	Project No.	Title
8340	505-40	Tent, aerial cable splicer—proposed military specification.
8340	505-41	Tent, pontoon barge—proposed military specification.
8420	505-3	MIL-U-797B—undershirt, men's (cotton quarter-sleeve)—proposed amendment 1.
8420	604-55	MIL-D-3014D—drawers, men's (cotton, short).
8440	603-128	Belts, waist, web, with clip, without buckle.
8440	602-53	Gloves, cloth, men's, dress.
8440	608-29	Suspenders, trousers.
8440	607-126	Leggings, men's.
8440	608-53	Necktie, men's, four-in-hand.
8445	608-15	MIL-A-15120—anklets, cotton, women's service—proposed amendment 1.
8430	609-069	Boot, knee and hip.
8430	609-29	Overshoe, rubber.
8430	609-28	Shoe, gymnasium.
8465	611-72	MIL-P-1691, pocket, ammunition, magazine, leather.
8465	611-78	MIL-B- , box, match.

SECTION V. LIMITATION STANDARDS PROJECTS

1. Limitation standards for the folowing F. S. C. classes have been coordinated among the interested DOD departments and have been forwarded to OASD (Supply and Logistics) for final approval:

Project No.	F. S. C.	Title	Date forwarded
603-76	7, 210	Household furnishings	Oct. 30, 1956
603-77	[1] 8, 340	Tents and tarpaulins	Nov. 21, 1956

[1] Limitation standard for this F. S. C. covers tents and tarpaulins, and components of tents only. Other end items in this class will be added after simplification of these items is completed.

2. Limitation standards for the following F. S. C. classes are now in coordination:

Project No.	F. S. C.	Title	Date initiated
612-54	8425	Underwear and nightwear, women's	December 1956.
608-163	8430	Footwear, men's	September 1956.
608-164	8435	Footwear, women's	Do.
607-127	8440	Hosiery, handwear, and clothing accessories, men's	July 1956.
608-110	8445	Hosiery, handwear, and clothing accessories, women's	September 1956.
610-109	8465	Individual equipment	October 1956.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

PROGRESS REPORT

Project No. Q-SI-8305-1
Title: Duck and Webbing.
Date: December 31, 1956.
Submitting Activity: Army (QM).

1. Revision of specification CCC-D-771b—Cloth, Cotton, Duck Plied-yarns (Army and Numbered) prepared under project No. 411-73 was approved July 30, 1956, as CCC-C-419. This specification supersedes:

CCC-D-771b	July 7, 1943
Navy Dept 24C8h	September 15, 1945
MIL-D-10861 (QMC)	January 22, 1951

2. Specification CCC–D–746 for Cloth, Cotton Duck, Fire, Water, and Weather Resistant is being revised under Project 603–78. Comments on Revision A which was forwarded for coordination April 27, 1956 have been received for resolution. In order to resolve the Comments received, it has been found necessary to schedule this Revision for review at the December 14 meeting of the QM Industry Advisory Committee on Duck.

3. Project 608–57, August 16, 1956, has been established to draft a new Federal Specification CCC–C–427 for Cloth, Cotton, Duck and Twill; Dyed, Bleached, Water-repellent and Mildew Resistant. This specification will supersede MIL–D–504C and in part CCC–D–771b. A draft of this specification was prepared and submitted for coordination November 1, 1956. Completion date for this project is March 27, 1957.

4. Revision B to Specification MIL–D–2004A for Duck, Nylon Spun Yarn has been prepared, coordinated, and final draft submitted for approval November 12, 1956.

5. Amendment 2 to Specification MIL–W–530A for Webbing, Textile, Cotton, General Purpose, Natural or in Colors prepared under Project No. 603–109 was approved October 3, 1956.

6. Federal Specification JJ–W–155 is being revised under Project No. 509–57 in order to combine Specifications JJ–W–155, JJ–W–00155A (NAVY–SHIPS), and MIL–W–3856. These specifications cover requirements for approximately 60 webbings and action has been taken to delete requirements for obsolete webbings and combine requirements for similar webbings. Action has also been taken to determine one set of test methods and one set of test requirements.

DEPARTMENT OF THE NAVY

BUREAU OF AERONAUTICS

Washington 25, D. C.

DECEMBER 19, 1956.

In reply refer to: Aer–AE–5211/273

From: Chief, Bureau of Aeronautics.

To: Office of the Quartermaster General, Department of the Army, Washington 25, D. C.

Attention: Chief, Standardization Branch Office of Research and Development.

Subj: Semi-Annual Report of Progress for Coated Fabrics—Project No. Q–SI–8305–2.

Ref: (*a*) OQMG ltr QMGRD–S 400.112 of November 19, 1956, (*b*) BuAer ltr Aer–AE–526/105 of June 26, 1956.

Encl: (1) Report of Minutes of Fourth Meeting of Task Group for Standardization of Coated Fabrics at NAMATCEN on September 26, 1956.

1. In reply to reference (a), enclosure (1) is submitted for information on the progress that has been made on the standardization of coated fabrics since the issuance of reference (b).

2. Work has been accomplished and is continuing to revise pertinent Bureau of Aeronautics' specifications and to review specifications submitted by other branches of the Services. Specifications which have received priority consideration in this respect are—

a. MIL–C– "Cloth, Waterproof, Coated, Nylon"—proposed Military Specification (WADC Project No. 505–60) FSC 8305 to supersede MIL–C–4479 (USAF) and MIL–C–7719A (Aer).

b. MIL–C–10799C "Cloth, Coated, Vinyl Cotton, Fire and Mildew Resistant" to supersede MIL–C–6107A (Aer), MIL–F–4143 (USAF3 and MIL–D–10799B.

c. MIL–C–8068 (USAF) "Cloth, Coated, Nylon, Rubber-Coated, Fuel Resistant"—proposed ASG revision.

3. Two new specifications, the first of this type to be included in the Military Series, have been promulgated by the Bureau of Aeronautics for Airship Envelope Fabrics. These are:—MIL–C–19554 (Aer) "Cloth, Coated, Dacron (Polyester Fiber) ZSG–4 type Airship Envelope" and MIL–C–19555 (Aer) "Cloth, Coated, Dacron (Polyester Fiber) ZS2G–1 type Airship Envelope". Copies of these specifications have been circulated throughout the Department of Defense for information, since they incorporate test procedures which are new to the coating industry.

4. It is understood that the Office of the Assistant Secretary of Defense has indicated that the subject project be continued under the guidance of the present Task Group Committee for the purpose of standardizing test methods, and a confirming letter to this effect is awaited.

5. A considerable amount of work still remains to be carried out to consolidate test procedures for coated fabrics, since many of the current methods are meaningless or obsolete. It is therefore proposed to call a meeting of the Committee early in 1957 to commence this test.

C. A. MARCKS (By direction.)

MINUTES OF FOURTH MEETING OF TASK GROUP FOR STANDARDIZATION OF COATED FABRICS AT NAVAL AIR MATERIAL CENTER ON SEPTEMBER 26, 1956

The meeting was called to order at 0945 on September 25, 1956 by the Chairman, Miss Margaret B. Hays. The chairman explained that the meeting had been called to resolve differences in the drafts of the two specifications proposed for coordination. At the third Task Group meeting, it had been agreed to try to complete the work by correspondence. The Standards Branch, Office of Assistant Secretary of Defense (Supply and Logistics), had set a deadline of October 10, 1956 for completion of these coordinated specifications but had extended the date to December 30, 1956. This meeting was called to expedite the necessary work.

Mr. Ross (WADC) gave the background for his work on accelerated weathering test for the proposed specification on coated nylon to supersede MIL–C–4479 (USAF) and MIL–C–7719A (Aer). He also discussed WADC Technical Note 56–133 "Determination of a Standard Accelerated Weathering Test for Vinyl and Neoprene Coated Nylon Fabrics." Copies of this report had been sent to Task Group Members. His goal was to develop an accelerated test to produce a rapid fabric breakdown. However, no other member had had any experience with his test procedure. This procedure was considered as a new test and there was not sufficient time to evaluate the procedure for possible incorporation in the coordinated specification. Data from Industrial Test Laboratory, Philadelphia Naval Shipyard, was presented for two weights of coated nylon exposed in a Weatherometer operating without filters and with the water spray. It was agreed to use latter procedure with 100 hours exposure for Type I and 150 hours for Type II fabrics in the coordinated specification. Fort Belvoir and Naval Air Material Center will cooperate with WADC in necessary additional laboratory work to determine percent loss in strength for these conditions.

Industry comments on the proposed specification were presented. It was agreed to—

(a) retain −67° F for low temperature tests;

(b) insert yarn number of base cloths in Section 6;

(c) accept 5.5 to 8.5 as range for pH;

(d) require conditioning of specimens for 40 to 48 hours before testing;

(e) retain tear strength requirements;

(f) raise adhesion minimum value to 5 pounds for Type I and 10 pounds for Type II;

(g) delete Type II, Class 2 and insert a new class, vinyl coated 18-oz. fabric;

(h) add tolerance for weight in ounces per square yard of ±0.5 for Type I and ±1.0 for Type II;

(i) make oxygen resistance test applicable to all classes.

Mr. Ross will revise the specification in accordance with the above, and will submit it through standardization channels with information copies to the Task Group.

Mr. Shurtleff (Quartermaster Research and Development Command) presented the essential comment submitted on proposed MIL–C–10799C specification for vinyl coated cotton. The following agreements were reached:

(a) change title to read "Cloth Coated, Vinyl, Cotton, Fire and Mildew Resistant";

(b) revise scope to exclude any clothing applications;

(c) delete paragraph 3.8, toxicity;

(d) retain paragraph 3.1 without adding any one address for source of standard sample;

(e) delete flame inhibitors from paragraph 3.4;
(f) insert flame inhibitors in Section 6 and add notation that they are not applicable to Air Force procurement;
(g) change Table II as follows:
(1) reduce breaking strength, warp for Type I, Class II to 80 pounds;
(2) insert footnote 5 for breaking strength after weatherometer for Type I;
(3) add footnote 5 "Shall retain 90 percent original breaking strength";
(4) delete requirements for Stiffness, Clark and crocking from Type I, and Type II, Classes 3, 4 and 5;
(5) add minimum requirement of 3 pounds coating adhesion for Type I;
(6) insert footnote 3 for cold crack for Type I.
(h) add sentence to paragraph 4.3 to show responsibility for inspection testing;
(i) Change Table III as follows:
(1) change cold crack to method 4.3.2.2.5 for Type I, Type II, Classes 3, 4, and 5 and method 5874 for Type II, Classes 1 and 2;
(2) insert footnote 4 for stiffness;
(3) insert footnote 1 for accelerated aging (Type I);
(4) delete footnote 7.
(j) change title of paragraph 4.3.2.2.5 to "Cold Crack (Type I)";
(k) add to paragraph 6.2 "Selection of applicable levels of packaging".

Mr. Shurtleff will revise the specifications in accordance with the above and will submit it through standardization channels with information copies to the Task Group.

There was a discussion of standardization. It was agreed that the proposed MIL–C–10799C was only a consolidation of three specifications but that the work necessary to reduce the number of classes could not be performed before December 30, 1956. Since the Task Group had been established under authorization of the former Defense Supply Management Agency, no additional work along these lines was initiated. It was agreed to request clarification of the status of the Task Group under the Standardization Activities of the Office of Assistant Secretary of Defense (Supply and Logistics).

Attendance fourth meeting of Task Group at Naval Air Material Center September 25, 1956

M. B. Hays	NAMATCEN
Carroll C. Moore	OMRO
P. Camberg	BUAER
W. Kelly	NAMATCEN
M. Cooper	NAMATCEN
J. Ross	WADC
R. W. Webster	BuShips
N. Sachs	Marine Corps Supply Activities
Clifford M. Brown	ERDL Fort Belvoir
R. Briganti	CSO
S. Shurtliff	QMR and DC
B. Martin	QMR and DC
H. Davidson	BuOrd
H. A. Kline	ITL
R. Grubb	ITL
E. Colacicco	NAMATCEN

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

PROGRESS REPORT

Project No. Q–SI–8415–1
Title: Armor, Body Fragmentation Protection
Date of Report: Dec. 20, 1956
Submitting Activity: Army (QM)

In the previous semi-annual report it was indicated that a controversy had arisen regarding project leadership for this project, and that an interdepartmental meeting would be scheduled to determine this assignment. A meeting was held on February 9, 1956 which resulted in no decision being reached on project leadership, the Army and Marine Corps representatives steadfastly holding out for assignment to their respective services. However, a decision was reached in the meeting that the Army and Marine Corps each would prepare separate statements of position and forward them to OASD (S and L) for final decision. Army statement was submitted to OASD (S and L) July 31, 1956.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Projects

PROGRESS REPORT

Project No. Q–E–8340–2.
Title: Ropes, Loops, and Grommets.
Date: December 31, 1956.
Submitting Activity: Army (QM).

1. Under date of August 27, 1956, Hq U. S. Marine Corps concurred in June 22, 1956, QMC proposal to standardize on the use of loops instead of grommets on paulins. Marine Corps also recommended that the box-stitch method of attaching loops be specified and that paulins be procured with ropes.

2. Under date of September 25, 1956, the Bureau of Supplies and Accounts, D/N, pointed out that the degradation experienced by the Army by reason of the brass spur grommet being in contact with the FWWMR finish on the duck has not been experienced by the Navy and that grommets are less expensive than loops. Navy requested details of construction of loops tested, and this detail was furnished October 18, 1956.

3. No reply has been received from the Air Force regarding the QMC proposal for the use of loops on paulins.

4. In view of the above, Revision of Federal Specification K–P–146 for Paulins, FWWMR, now in coordination provides for grommets to be used in types I and II Paulins and loops to be used in Type III Paulins.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

PROGRESS REPORT

Project No. Q–E–8340–3.
Title: Study of Hatch Type Tents.
Date: December 31, 1956.
Submitting Activity: Army (QM).

1. Specification MIL–T–13056A (QMC) has been coordinated as a limited coordination specification and has been placed into full coordination.

2. It is estimated that this Project will be completed approximately June 15, 1957.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

PROGRESS REPORT

Project No. Q–E–8340–7.
Title: Study of Shelter Half Tents.
Date: December 31, 1956.
Submitting Activity: Army (QM).

1. The comparative camouflage study conducted by the Corps of Engineers has been completed. Results are contained in Report "Camouflage Tests of Army and Marine Corps Shelter Half Tents," Project 8–31–01–001, September 14, 1956. Test results indicated that shade Oliver Green 107 as contained in experimental

T–56–3 Shelter Half Tent was superior in camouflage characteristics to the OD 7 of standard Army Shelter Half Tents and the patterned camouflage fabric of the standard Marine Corps Shelter Half Tent.

2. Copies of the report have been furnished to the Marine Corps with the recommendation that Olive Green 107 be adopted as the standard shade for Department of Defense Standardization of Shelter Half Tents.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

Project No. Q–E–8430/35–1
Title: Shoe Lasts and Footwear
Date: December 31, 1956
Submitting Activity:
Air Force
Army (QM)
Marines
Navy

1. *Last, shoe, dress, man's oxford.*—Specification MIL–L–3931A was approved September 18, 1956, thus standardizing a single design of wood shoe last for men's oxfords for all Services.

2. *Shoe, dress, man's, oxford.*—Meetings were held on July 20, 1956, and October 9, 1956, to discuss and resolve recommendations of the Department of the Navy. Based on these meetings, a revision of Specification MIL–S–13192 is in process.

3. *Last, footwear, combat and service.*—This phase is complete pending test and standardization actions referred to below.

4. *Men's leather combat boots and service shoes.*—Combat boots for joint user test are physically on hand. Initial draft of test plan, however, has raised questions regarding the appropriate participation of the Medical Services. A small quantity of test boots has been furnished the Army Medical Research Laboratory, Fort Knox, Kentucky, for intensive study of the physiological aspects of adopting this new last. Results of this study will indicate whether proposed joint user test will cover simply durability, fit, and comfort, or whether a more comprehensive test, including medical aspects to be determined, will be necessary.

Upon completion of AMRL study, drafts of test plan will be forwarded to other services for comment.

5. *Rubber insulated boot for cold climate.*—Standardization of Boots, Combat, Insulated, Cold Dry, has been deferred pending service (user) test, now in process at the Arctic Training Base of the Continental Army Command.

6. *Shoe, oxford, women's.*—a. A prototype modification of the newly developed Navy mock moccasin oxford has been furnished to the Women's Services of the Army. This oxford differs from the Navy oxford primarily in heel height, having a 12/8 inch heel compared to the Navy 8/8 inch heel. The Women's Services of the Army have agreed to evaluate a quantity of these shoes by wear test. These modified moccasins were made over the current Army standard Last, Shoe, Dress, Women's.

b. Action has been initiated to procure sufficient shoes to permit the evaluation referred to above and also to provide samples to Air Force, Marine Corps, and Navy as a basis for future reference.

c. Informal industry coordination during the past two years, has indicated that the current Army standard Last, Shoe, Dress, Women's, is a good fitting last and should be continued in use. This industry opinion is considered to be a sufficient basis for this Command to recommend continued utilization of the standard last, particularly since:

(1) No complaints regarding fitting qualities of this last have been brought to the attention of this Command.

(2) Anthropometric data on women's feet, similar to data on men's feet which were the basis for development of the Fort Knox IV (MIL I) oxford last, are not available for use in determining any features of the current last which need modification or improvement.

(3) The Army and Air Force are currently using the standard last, whereas the Navy and Marine Corps do not use a standard last but use commercial

lasts. Since there is no standardization among commercial lasts, the use of commercial lasts of the various manufacturers cannot be recommended for Army use.

d. It is proposed that the following line of action will be taken:

(1) Women's Services of the Army will be encouraged to accept the mock moccasin, as developed by the Navy but built over the Army last, Shoe, Dress, Women's.

(2) Standard upper patterns will be developed for the new shoe, with 12/8 heel height.

(3) Study will be made to determine whether standard pattern may be used for manufacture of oxfords with 8/8 inch heel height.

(4) Specification will be written standardizing all manufacturing processes and materials but providing for:

(a) Manufacture of 12/8 inch heel on Government-owned lasts and standard patterns.

(b) Manufacture of 8/8 inch heel on commercial lasts, using either commercial or standard Government patterns, as determined by d (3) above.

e. The above plan takes into consideration the possibility that the Navy Department will continue to desire an 8/8 inch heel height but does not preclude all possible action toward complete standardization of the Women's Dress Oxford.

f. It is estimated that above actions will be completed by September 30, 1957.

DEPARTMENT OF DEFENSE

Interdepartmental standardization

PROJECT REPORT

Ref: (a) Interdepartmental Standardization meeting held at Washington, D. C., on August 8, 1956

(b) BUSANDA letter S32 L8–4/1–1 dated October 15, 1956, with enclosures

Project No. 609–30

Title: Boots, Fireman

Date of report: November 29, 1956

Submitting Activity:

Navy

BuSandA

1. At reference (a) meeting it was decided to assign to the Navy a study project to attain maximum practical standardization in material, design, and safety features of Boots, Fireman, for the issuing services. Reference (b) assigned project No. 609–30 to the Clothing Supply Office.

2. Letters have been sent to the Army, Air Force, and Marine Corps requesting their requirements for the Boots, Fireman. An investigation is being conducted with the General Services Administration to establish their interest in the Boots, Fireman. When all the data concerning the use, procurement interest, and physical requirements is compiled, a report, recommending the necessary action to be taken, will be forwarded.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization

PROGRESS REPORT

Ref:

(a) Interdepartmental standardization meeting held at Washington, D. C., on June 27, 1956.

(b) BUSANDA letter S63/36 L8–7/FSC 8440 dated Aug. 17, 1956, w/encl

(c) CLOSUPO, BKLYN 1D62–8: bz A11/L8–4 dated Nov. 23, 1956.

Project No. 608–50.

Title: Handkerchiefs, Man's and Woman's.

Date of Report: Nov. 29, 1956.

Submitting activity: Navy: BuSandA

1. At reference (a) meeting, it was decided to assign to the Navy a study project to ascertain the necessity for continued stocking of handkerchiefs. If stocking of the handkerchiefs is to be continued, a specification should be prepared which would include a minimum number of grades and types of hems. Reference (b) assigned project No. 608–50 to the Clothing Supply Office.

2. As indicated by reference (c), this Office recommended that the stocking of handkerchiefs be continued. Accordingly, this Office will conduct a study of commercially available fabrics and commercial hemming practices in order to arrive at common specification requirements that would be satisfactory to all users of handkerchiefs. Upon completion of this study, an initial draft of a specification will be prepared and coordinated with industry. A final draft will then be forwarded to BUSANDA for coordination with other interested agencies.

3. Completion of this project will result in the elimination of 2 of the 5 items presently listed by the services.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

PROGRESS REPORT

Project No. 608–101
Title: Hardware for Leather Accessories, Military Police
Date: December 31, 1956
Submitting Activity: Army (QM)

Tentative agreement was reached by the representatives of this Command and of the Departments of the Army and Air Force to standardize on a bright chrome finish for hardware for Black Leather Accessories for Army Military Police and Air Police. However, samples of hardware furnished for bright chrome finish presented to high elements of the Department of the Army were not satisfactory. Additional samples will be furnished to correct past inadequacies.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

PROGRESS REPORT

Project No. 608–49
Title: Scarves, Neckwear, Men's and Women's
Date: December 31, 1956
Submitting Activity: Army (QM)

1. This project involves the comparison and evaluation of scarves purchased under 13 separate instruments (specifications, purchase descriptions and samples) to standardize the minimum number of end items feasible and to attain the maximum practical standardization in material, construction, design and color.

2. Samples of all scarves in this area were requested in September. Final group of samples was received November 26, 1956. Initial QMC recommendations to other Services will be made on or about January 31, 1957.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

PROGRESS REPORT

Project No. 608–106
Title: Stockings, Women's, Nylon.
Date: December 31, 1956.
Submitting activity: Army (QM).

1. Subsequent to initiation of this project on August 20, 1956, action has been taken to procure samples of stretch type nylon stockings for field test. Eighteen (18) dozen pairs of commercially available stretch type nylons are being procured for:

(a) Comparison with standard nylons procured under MIL–S–841A.

(b) Distribution to Navy, Air Force, and Marine Corps for sample purposes.

2. The elasticity of these nylons is brought about by knitting techniques rather than by the use of the more expensive stretch type yarns; i. e., Helenca.

3. Negotiations toward the adoption of a neutral color have not been initiated pending concrete findings with respect to adequacy of the stretch type nylons.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

PROGRESS REPORT

Project No. 608–142
Title: Handbag, Women's
Date: December 31, 1956
Submitting Activity: Army (QM)

Samples of handbags now being used by all women Services were requested on October 17, 1956, but have not yet been received. Upon receipt, evaluation will be made by this Command and a meeting at technical level will be set up at which recommendations of the Quartermaster Corps with respect to standardization of size, number of compartments, type of closure, type of strap attachment and military decoration will be presented.

DEPARTMENT OF DEFENSE

Interdepartmental Standardization Project

SEMI-ANNUAL PROGRESS REPORT

Reporting Period: July 1, 1956, to December 31, 1956, inclusive.
Project No.: Q–P–83/84/7105 (Mattresses Only)/7210–1.
Title: Packaging Standardization of Textiles, Apparel and Related Items.
Date of Report: December 5, 1956.
Submitting Activity: Army (QM).

1. Meetings held during reporting period:

(a) Sub-Task Group—June 28–29, 1956—Marine Corps Clothing Depot, Philadelphia, Pa.

(b) Working Group—August 28, 1956—Marine Corps Clothing Depot, Philadelphia, Pa.

The sub-task group referenced in (a) above was established to review the differences in packaging requirements submitted by the various Services on Blankets, Bed—Undershirts, Man's (Cotton ¼ sleeve)—Shoes, Dress and Boots, Combat. This was accomplished by visual examination of stock items. Findings of this sub-task group were discussed and reviewed by the parent working group at meeting referenced in (b) above.

2. Standardization Agreements Reached (initiation of specification action not completed).

(a) 7210–T2. Blankets, Bed. Blanket packaging method for large scale distribution standardized to 2.0 per bale—for small scale distribution, 8 per fiberboard container.

(b) Undershirts, Man's (Cotton ¼ sleeve). Packaging method for large-scale distribution standardized to 360 per bale—for small-scale distribution, varying quantities as determined by size per fiberboard container.

3. Items in review stage—not finalized.

(a) 8430–T1, Shoe, Dress, 8430–T3, Boots, Combat.

4. FSC Classes forwarded to working group for preparation of respective Service requirements. (For future meeting discussions.)

FSC Class 8440: Hosiery, Handwear and Clothing Accessories, Men's—61 Items.

FSC Class 8445: Hosiery, Handwear and Clothing Accessories, Women's—34 Items.

FSC Class 8430: Footwear, Men's—51 Items.

5. Next meeting date: The next meeting of the Working Group will be held at the Institute, December 12, 1956.

Exhibit E

Semi-Annual Report—Subsistence

SECTION I. INTRODUCTION

This report is rendered by OQMG, DA, as DOD standardization assignee, as of December 20, 1956, in accordance with Standardization Program: Textiles and Subsistence (FSC 7210, 83, 84, and 89), January 4, 1956; and covers the period June 21, 1956 to December 20, 1956.

SECTION II. SIMPLIFICATION ACCOMPLISHMENTS

1. Simplification negotiations were completed in the six months period of this report for all classes in Group 89—Subsistence:

FSC 8905—Meat, Poultry and Fish (Project No. 601–16)
FSC 8910—Dairy Foods and Eggs (Project No. 601–17)
FSC 8915—Fruits and Vegetables (Project No. 603–93)
FSC 8920—Bakery and Cereal Products (Project No. 601–18)
FSC 8925—Sugar, Confectionery, and Nuts (Project No. 601–19)
FSC 8930—Jams, Jellies, and Preserves (Project No. 601–20)
FSC 8935—Soups and Bouillons (Project No. 601–21)
FSC 8940—Special Dietary Foods and Food Specialty Preparations (Project No. 601–22)
FSC 8945—Food Oils and Fats (Project No. 601–23)
FSC 8950—Condiments and Related Products (Project No. 601–24)
FSC 8955—Coffee, Tea, and Cocoa (Project No. 601–25)
FSC 8960—Beverages, Nonalcoholic (Project No. 601–26)
FSC 8965—Beverages, Alcoholic (Project No. 601–27)
FSC 8970—Composite Food Packages (Project No. 601–28)
FSC 8975—Tobacco Products (Project No. 601–29)

2. Results of simplification, if maintained through the final coordination, are tabulated in Table I (Inclosure 1).

SECTION III. SELECTED ITEM, PACKAGING AND EXTENSION PROJECTS

A recommendation for establishments of an Extension Project to cover Bacon, Derinded, Slab, Frozen has been forwarded to OASD (S and L). A copy of this letter of recommendation to OASD (S and L) is inclosed as Inclosure No. 2. Upon completion of the detailed analysis of simplification results for each Federal Supply Class, which is performed concurrently with the Summary Analysis for each class, recommendations for establishment of additional required extension projects will be forwarded to OASD (S and L).

SECTION IV. SPECIFICATION PROJECTS

Ninety-five projects for revision, amendment or preparation of specifications or purchase descriptions were identified in simplification. Study is currently being made to determine need for all these projects and establishment of realistic completion dates on those determined necessary.

Simplification results (if maintained through final coordination)

FSC	Total items cataloged	Items standardized	Indicated items eliminated	New items adopted	Extension projects to be established	Specification projects to be established	Limitation standard projects to be established
8905	339	184	107	7	1	8	1
8910	70	50	16	7		3	1
8915	567	362	24	39		58	1
8920	215	90	40	7		4	1
8925	130	43	29	11		7	1
8930	156	62	44	20		1	1
8935	51	37	2	0		1	1
8940	115	33	24	17		2	1
8945	17	14	3	5		1	1
8950	161	75	43	6		9	1
8955	47	10	9	0		0	1
8960	52	17	11	1		0	1
8965	0	0	0	0		0	0
8970	54	50	0	21		1	1
8975	4	0	0	0		0	0
Total	1,978	1,027	304	141	1	95	13

DEPARTMENT OF THE ARMY

OFFICE OF THE QUARTERMASTER GENERAL

Washington 25, D. C.

DECEMBER 14, 1956

QMGRD–S 400.112

Subject: DOD Standardization Project—FSC Class 8905, Meat, Poultry, and Fish (Project No. 601–16)

To: Staff Director for Standardization, Office of Assistant Secretary of Defense (Supply and Logistics), The Pentagon, Washington 25, D. C.

1. References:

a. Memo for ASA (LOG) from ASD (SandL), January 6, 1956, subject: "Acceleration of Standardization Program for the Textile Area (FSC 83, 84, 7210) and Subsistence Area (FSC 89)" and attachment thereto: "Standardization Program: Textiles and Subsistence" January 4, 1956.

b. Interdepartmental Standardization Task Group Meeting August 19, 1956, to August 25, 1956.

2. As a result of an agreement reached at the meeting referenced in paragraph 1b above and in accordance with paragraph (4) (f) of reference 1a above, it is recommended that an extension project be initiated as follows:

a. *Title.*—Bacon, slab, frozen.

b. *Statement of problem.*—(1) The Army, Air Force, and Marine Corps have standardized on item of Bacon, Slab, Frozen to be consumed overseas, with 42-hour smoke required for preservation purposes.

(2) The Department of the Navy requests standardization of Bacon, Slab, Frozen for overseas consumption, which is identical to above item except that the Department of the Navy specifies 24-hour smoke.

c. *Objective.*—Conduct a study to arrive at interdepartmental agreement on a common requirement for bacon, slab, frozen for overseas consumption.

d. *Assignment of project.*—Project leadership to be assigned to the Department of the Navy.

For the Quartermaster General:

WILLIAM D. JACKSON,
Colonel, QMC,
Chief, Office of Research and Development.

EXHIBIT F

IMPLEMENTATION OF DEPARTMENT OF DEFENSE DIRECTIVE 4120.3

In response to this question, attached are—

(a) Copies of the December 21, 1956 and January 18, 1957, memoranda to the three military departments, requesting them to submit certain data on their implementation of Department of Defense Directive 4120.3.

(b) Copies of the following Air Force Regulations which pertain to the Defense Standardization Program:

AFL 67–5: November 22, 1954—The Defense Standardization Program

AFR 20–14: October 7, 1955—Organization—General—Air Force Organization for Conduct of the DOD Standardization Program

AFR 81–5: December 10, 1955—Air Force Participation in the Defense Standardization Program

AFR 81–7: February 3, 1956—Specification and Standards Report on Limited Coordination and Interim Specifications and Standards

(AMCR 81–3, ARDCR 81–1: February 7, 1956—Specifications and Standards AMC–ARDC Participation in the Department of Defense Standardization Program

AFR 81–1: August 3, 1956—Specifications and Standards Policies and Procedures Governing Specifications and Standards

AFR 67–20: July 23, 1956—Supply—Report on DOD Standardization (Including Packaging) Program

We understand that the Department of the Navy, in a letter dated December 11, 1956, (file reference N/72B/NWB: hg) forwarded to the Military Operations Subcommittee copies of 59 implementing documents. As indicated at the hearing on January 31, 1957, copies of the Army's implementing documents have also been made available to the Subcommittee.

AFL 67–5

DEPARTMENT OF THE AIR FORCE

Washington 25, D. C.

22 November 1954

AIR FORCE LETTER)
No. 67–5)

Subject: The Defense standardization program

To: Commanders, Air Materiel Command, Air Research and Development Command

1. Department of Defense Directive 4120. 3, October 15, 1954, restates the scope, purpose, and objectives of the Defense Standardization Program conducted under act of July 1, 1952 (66 Stat. 318; 5 U. S. C. 173)—see AFBul 22, 1952. A copy of the DOD Directive is attached for information. The DOD detailed operating instructions, when issued, will be reflected in appropriate Air Force directives.

2. The DOD Directive presents broad policy and principles; it is not intended to be sufficiently definitive for the development of detailed implementing procedures. However, it does provide background necessary to an understanding of DOD instructions now under preparation. The Air Force will be asked for comments on these instructions before they are issued.

3. Department of Defense directives referred to herein are not available and will not be requisitioned.

By order of the Secretary of the Air Force:

E. E. TORO,
Colonel, USAF,
Air Adjutant General.

AFL 67-5

15 October 1954

Number 4120.3

DEPARTMENT OF DEFENSE DIRECTIVE

Subject: Defense Standardization Program

I. PURPOSE

This directive restates and clarifies the scope, purpose and basic objectives of the Defense Standardization Program and provides a statement of the principles and policies under which this program is to be prosecuted in consonance with other approved DOD programs.

II. AUTHORITY AND RESPONSIBILITY

The Defense Standardization Program is conducted under the authority of the National Security Act of 1947, as amended, the Defense Cataloging and Standardization Act of 1952 and the Department of Defense Reorganization Plan No. 6 of 1953. Responsibility for the administration of such standardization is specifically assigned to the Assistant Secretary of Defense (Supply and Logistics) by DOD Directive 5126.1 of August 13, 1953. The collateral responsibility of ASD (Applications Engineering) will be coordinated under DOD Instruction 5126.4 dated March 12, 1954.

III. CANCELLATION

This directive supersedes DOD Directive 4120.3, February 2, 1953, Munitions Board memorandum dated July 21, 1949 titled "Military (MIL) Specifications Manual Policies and Procedures" and Munitions Board memorandum dated December 2, 1949 titled "Policy Governing Control of Procurement Under Approved Specifications" and any standardization instructions inconsistent with this directive or policies established herein.

IV. THE STANDARDIZATION PROGRAM

A. Scope

The standardization program is concerned with—

1. Standardization of material, components, equipment and processes with respect to items and services approved for use by the Army, the Navy, and the Air Force.

2. Standardization of engineering practices and procedures essential to design, procurement, production, inspection, application, preservation and preparation for delivery of items of military supply.

B. Purposes

The purposes of the Defense Standardization Program are—

1. To improve the efficiency and effectiveness of logistical support, and operational readiness of the Army, the Navy and the Air Force.

2. To conserve money, manpower, time, production facilities and natural resources.

C. Objectives

The purposes of the Defense Standardization Program will be realized by accomplishment of the following objectives:

1. Adoption of the minimum number of sizes, kinds or types of items and services essential to military operations.

2. Achievement of the optimum degree of interchangeability of the component parts used in these items.

3. Development of standard terminology, codes and drawing practices to achieve common understanding and clear interpretation of the description of items and practices.

4. Preparation of engineering and purchase documents to insure the design, purchase and delivery of items consistent with the scope and purpose of the Defense Standardization Program.

5. Providing the military departments with the most reliable equipment possible by the adoption of materiel which has been evaluated in accordance with established Government specifications and standards.

V. DEFINITIONS

For the purpose of the Defense Standardization Program the following definitions will apply:

A. Standards

Standards are documents that establish engineering and technical limitations and applications for items, materials, processes, methods, designs and engineering practices.

They will—

1. Limit the selection of materials, items, services, etc. in order to provide for—
   a. Functional and physical interchangeability of parts, components, subassemblies and equipments.
   b. Compatibility of items and equipments in their own or related systems.
2. Establish basic engineering terminology and codes.
3. Limit the variety of end-use items which can be procured for stock and issue.

B. Specifications

Specifications are documents, intended primarily for use in procurement, which are clear, accurate descriptions of the technical requirements for items, materials or services including the procedures by which it will be determined that the requirements have been met. Specifications for items and materials shall also contain preservation, packaging, packing and marking requirements.

C. Handbooks

Handbooks are reference documents used in supply management operations which bring together under one cover general information, procedural and technical use data which are related to the standardization program.

D. Deviation

A change to specification or standard requirements, made prior to award of contract and detailed in the contractual document.

E. Waiver

A change to specification or standard requirements, made subsequent to award of contract, which may or may not be reflected in a change to the contractual document.

F. Item

As used in this document, the term "item" is a broad term and includes, but is not restricted to, equipments, components and subassemblies.

VI. PLAN

A. In order to achieve the objectives of the program, the Office of the Assistant Secretary of Defense (Supply and Logistics) will assign to the military departments, after coordination therewith, responsibility for portions of the program. The assignments will be consistent with departmental capacity and supply interest, with due regard to departmental mission. Assignment will be made—

1. For supply items, by classes in the Federal Supply Classification system.
2. For General Engineering Standards, by practices, processes, codes, standard terminology, etc., required for logistic support.

B. For each portion of the program assigned, the responsible military department shall develop a detailed plan for the achievement and maintenance of standardization in that area in collaboration with other interested departments. The plan shall include provision for appropriate work assignments, or reassignments to other departments, where appropriate. The initial efforts shall be directed toward the elimination of unneeded items currently in the supply system (simplification). The next step shall consist of an analysis of the remaining varieties, types, kinds and sizes of items based on engineering criteria, needs, uses, military characteristics and other fundamental factors. The purpose of this process is the further elimination of items or the development of new standard items to

replace existing items. The plan shall include full consideration of industry practices and shall insure coordination with appropriate segments of industry. Detailed plans so developed shall provide for the following:

1. Methods for achieving simplification in each assigned area to eliminate varieties excess to current or planned requirements.

2. Development of standards and specifications for items, materials, equipments and services concurrently with, or apart from, simplification actions.

3. Development and preparation of all necessary engineering standards.

C. The plan for standardization developed pursuant to assignments shall include the necessary procedures by which the standardization is to be achieved. These procedures shall insure that the essential requirements of all services are accommodated in the standardization achieved. These procedures may provide for the achievement of standardization by an individual military department, by joint task groups, or, in the case of commodities where the art is rapidly developing, through the use of standing committees. It is expected that departments will give members of such task groups and standing committees a reasonable latitude to resolve issues in committee in order that departmental concurrences will be expedited. Where practicable and desirable, industry advisory committees will be established to assist in standardization.

D. The determination as to the desirability of, and the priority of, standardization projects will be made on the basis of resulting identifiable benefits. Therefore, a factual evaluation of benefits to be derived from the standardization project will be made before the project is undertaken. These benefits will be balanced against the cost of completing the project and its initiation and priority determined accordingly. It is recognized that benefits and costs may not lend themselves to dollar measurement. Appropriate values shall be assigned to nondollar benefits and costs. In assessing the benefits to be derived from standardization, consideration consistent with other approved DOD programs and policies will be given to the degree to which standardization contributes to—

1. Facilitating the determination of logistics requirements,
2. Facilitating procurement through—
   a. The consolidation of purchasing requirements,
   b. Increasing sources of supply,
   c. Establishment of the appropriate level of performance,
   d. Improvement of design and producibility of items of supply.
3. Improving logistic support,
4. Providing significant logistic or engineering benefits or dollar savings,
5. Facilitating interdepartmental cross-servicing,
6. Reducing distribution and maintenance costs,
7. Saving of materials on the DOD conservation list.

E. Programs developed by the military departments pursuant to assignments of responsibility shall be submitted to the OASD (S and L) for review and shall be carried out in coordination with all interested departments in accordance with the plans submitted.

F. Differences among the military departments in any phase of the program, which cannot be reconciled by the assigned department, will be referred to OASD (S and L) for resolution.

VII. GENERAL STATEMENT OF STANDARDS AND SPECIFICATIONS POLICY

Federal and military specifications and standards in the Department of Defense shall be governed in their development, preparation and use by the following:

A. General

1. *Specifications.*—Specifications prepared by the military departments shall be issued in either the Federal or military series. Existing departmental, bureau or service specifications are authorized for use in production and procurement. However, they will be converted to the Federal or military series or canceled by 1 July 1955.

2. *Standards.*—Effective six months from the date of this directive, all new standards prepared by the military departments shall be issued in the Federal or military series. Existing standards not in the Federal and military series will be integrated into the Defense Standardization Program by conversion to one of these series under a planned program designed to minimize cost and permit an orderly transition. The development of this program will be coordinated by OASD (S&L) with the departments.

B. Preparation and coordination

1. Federal and military standards, specifications, qualified products lists and standardization handbooks shall be prepared, coordinated and implemented in conformance with approved Federal and DOD policies, regulations, instructions and procedures.

2. Except as indicated herein, Federal and military specifications shall be prepared for procurement of items to be repetitively stored and issued in the military supply systems, and shall include provisions for preservation, packing, packaging and marking in accordance with DOD Directive 4100.14, 27 Feb 53. Federal and military specifications need not be prepared (or used) for the following:

a. Purchase incident to research and development,
b. Purchase of items for test or evaluation,
c. Purchase of laboratory test equipment for use by Government laboratories,
d. Purchase of items for authorized resale except military clothing,
e. Purchase of items in an amount not to exceed $1000.00 (multiple small purchases of less than $1000.00 of the same item shall not be made for the purpose of avoiding the intent of this exception),
f. Purchase of one-time procurement items,
g. Purchase of items for which it is impracticable or uneconomical to prepare a specification (repetitive use of a purchase description containing the essential characteristics of a specification will be construed as evidence of improper use of this exception),

3. A purchase description may be used for procurement of items, materials, and services covered by the above exceptions.

4. Specifications normally will be prepared and used regardless of dollar volume of anticipated procurement when required to meet one or more of the following conditions.

a. Protect the health and insure the safety of personnel using or handling the item,
b. Assure required interchangeability,
c. Assure the minimum quality level required for adequate performance,
d. Assure the incorporation of necessary military characteristics.

C. Relationship to the Federal standardization program

Standardization involving materials, items, and services common to the Department of Defence and at least one civilian agency will normally be coordinated with the civil agencies of the Federal Government and will be reflected in Federal specifications and standards. However, all standardization effort within the Department of Defense shall be integrated, planned, and conducted in accordance with procedures and schedules established by the OASD (S&L).

D. Mandatory use of specifications and standards

Coordinated Federal and military standards and specifications approved for use by the DOD are mandatory for use in the design, selection and procurement of the items, materials, or services so covered. Excluded from this requirement are existing coordinated Federal and military standards and specifications, developed under policies permitting voluntary exemption by the military departments. These documents shall be scheduled for revision under plans developed by OASD (S&L) in coordination with the departments.

1. *Standards.*—Each military department will establish procedures to insure the use of coordinated standards and to insure that waivers or deviations are authorized by competent authority. Authorized waivers and deviations to standards will be reported periodically to the Assistant Secretary of Defense (Supply and Logistics) in accordance with separate instructions. When repeated deviations or waivers are found necessary, action to revise the standard will be taken in accordance with established procedure. Where it is determined that a standard is no longer required, action leading to its cancellation should be taken in accordance with established procedure.

2. *Specifications.*—Except as noted above (secs. VII–B and VII–D), coordinated Federal and Military specifications are mandatory on all activities of the Department of Defense for use in procurement either by formal advertising or negotiation, and, as appropriate, in design. The military departments shall establish procedures to assure—

a. That these specifications are used,

b. That justification for deviations or waivers therefrom are subjected to competent review before authorization.

c. That when repeated deviations or waivers are found necessary, action to revise or amend the specification be taken in accordance with established procedures,

d. Each new item acquired by the military departments shall be immediately submitted for inclusion in the standardization program in keeping with Section IV–C–1 of this directive.

VIII. COMMERCIAL ITEMS, INDUSTRIAL STANDARDS AND THE NEED FOR FLEXIBILITY IN CHANGING SPECIFICATIONS AND STANDARDS

In the development of Federal and military specifications and standards, commercial end items and component parts will be used to the maximum degree practicable. Commercial items will be adopted without modification unless such procedure will not satisfy military requirements such as performance or interchangeability as determined by competent authority. When commercial items are available, reasons for unsuitability for military use shall be made a part of the record of the project development.

Nationally recognized industry and technical society standards and specifications shall be used to the maximum extent practicable in the development and design of materiel and in the preparation of military and Federal standards and specifications. This policy will permit the maximum conservation of engineering effort within the Department of Defense and, at the same time, assure that the requirements of the Department of Defense are successfully geared to existing industrial practices and resources.

Standards and specifications, at the time of issuance, shall prescribe requirements reflecting the existing stage of technological development and current industrial practices. Changes are to be made whenever warranted by technological and scientific progress, by experience in production or use, or by materials shortages. Under this policy, standards or specifications shall not be construed as inalterable, and shall be designed to permit unrestricted technological development or improvement of design.

IX. COORDINATION WITH INDUSTRY

The department developing standards and specifications shall assure that adequate coordination has been effected with those sections of industry concerned, including potential new suppliers, where appropriate. The impact of the proposed standardization upon the ability of industry to produce in the quantities required must be assessed before final decision to standardize is made. Also, advantage can be taken of industry suggestions for improvement through application of the latest technological advances. It is essential that the industry be aware, at an early stage, of the changing requirements of the Armed Forces and be given an opportunity to evaluate the proposed change in the light of technical soundness; foreseeable costs or procurement delays; need for retooling; new processes or techniques required; training of the labor forces and the effect upon full and free competition.

Coordination shall be accomplished with a representative cross-section of industry, including a proper distribution by geography and size of business, and including both trade association members and unaffiliated companies, and, where appropriate, trade associations, technical societies, and other standardization organizations.

X. ORGANIZATION

Each military department shall establish the necessary organization required to carry out effectively its responsibilities under this program. Since military supply standardization and engineering standards affect design, development, procurement, cataloging, distribution, use and maintenance of items of military supply, the responsible organizational unit shall be designated at a level of authority adequate to insure effective coordination and management of the standardization effort. This organizational unit shall be so organized and staffed as to effectively implement, for its department, delegations of responsibility for standardization by OASD (S and L) in accordance with the principles of this directive.

Responsibilities assigned to this organizational unit should include—

1. The coordination of the standardization efforts of the services, bureaus and commands.
2. Assistance in the establishment of adequate budgets and staffs for standardization operations and the integration of departmental and Department of Defense standardization.
3. Development of departmental policies and procedures to assure the development and use of standards and specifications in accordance with this directive.
4. Development of departmental policies and procedures for monitoring departures from standards and specifications.
5. Prevention of overlapping and duplicating specifications and standards.
6. Maintenance of the official channel of communication between its department and other departments and the Office of the Assistant Secretary of Defense (Supply and Logistics) with respect to the Defense Standardization Program.

In addition, each military department shall furnish one member and alternate to serve as an advisor to the Staff Director, Standardization Division, Office of the Assistant Secretary of Defense (Supply and Logistics) in the development of the defense standardization policies, program and procedures.

XI. REPORTS

The military departments shall report progress under this program in accordance with Public Law 436, 82d Congress, and the instructions contained in DOD Instruction No. 4120.1 dated May 7, 1954.

XII. IMPLEMENTATION

The provisions of this directive are effective upon receipt. Each military department shall implement the substance of this directive as soon as possible and insure the instruction of all elements and levels of responsibility concerned in the content, intent, principles and objectives of this program. Copies of implementing policies and procedures will be provided to the Office of the Assistant Secretary of Defense (Supply and Logistics) as they are issued.

SECRETARY OF DEFENSE.

AFR 20
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AIR FORCE REGULATION
No. 20–14

DEPARTMENT OF THE AIR FORCE
Washington, *October 7, 1955*

ORGANIZATION—GENERAL

Air Force Organization for Conduct of the Department of Defense Standardization Program

1. PURPOSE. This regulation prescribes the organization for Air Force participation in the Department of Defense Standardization Program outlined in Air Force Letter 67–5, dated 22 November 1954; it also sets forth the responsibilities of Headquarters USAF, the Air Materiel Command, the Air Research and Development Command, and other major air commands in carrying out this program.

2. AIMS OF THE DEPARTMENT OF DEFENSE STANDARDIZATION PROGRAM. The Defense Standardization Program is designed to achieve the highest practicable degree of standardization of items used throughout the Department of Defense. Some of the important features of this program are: to develop and use a single series of standards and specifications; to eliminate overlapping and duplicating item specifications; and to develop and use identical or similar engineering documents, practices, and procedures.

3. DEFINITIONS:

a. *Departmental Standardization Office* (Dep SO) is the office within each military department that administers and monitors Defense Standardization Program efforts within that department.

b. *Administrative responsibility* includes initiation of actions and administration of schedules necessary to support the DOD Standardization Program.

4. POLICY:

a. The Air Force will participate actively in the DOD Standardization Program, complying with the responsibilities and adopted measures set forth in Air Force

Letter 67–5, this regulation and other pertinent USAF and DOD directives and manuals. (NOTE: Public Law 436, 82nd Congress, provides that standardization measures shall not prohibit the military departments in the Department of Defense from acquiring new items required to carry out their mission.)

b. Air Force participation in the program and compliance with the decisions reached therein involve basic functional responsibilities of both AMC and ARDC. Air Force actions in support of the program will be in conformance with the basic functional responsibilities as set forth in other regulations and directives; nothing herein is intended or will be construed to alter those responsibilities.

5. RESPONSIBILITIES FOR AIR FORCE PARTICIPATION IN THE PROGRAM:

a. *Headquarters USAF* will—

(1) Provide and publish policy guidance and broad direction for the program.

(2) Approve and publish regulations, manuals, and instructions for Air Force participation in the program.

(3) Serve as the Air Force point of contact with the OASD (S&L) for policy matters.

(4) Approve and submit all Air Force standardization reports and plans that require Department of Defense approval.

b. The *Air Materiel Command* will—

(1) Accomplish Air Force Departmental Standardization Office (Dep SO) functions as outlined later in this paragraph.

(2) Provide for ARDC representation to the Dep SO as agreed to by the Commander, ARDC, and Commander, AMC.

(3) Perform that portion of the program which lies within its assigned area of functional responsibilities, to include scheduling, establishing priorities, and preparing plans, studies, and projects.

(4) Institute procedures to insure compliance with adopted standardization measures within the assigned area of functional responsibilities.

(5) Budget for AMC support of the program.

(6) Jointly with ARDC, establish procedures, draft regulations, manuals, and instructions, and provide policy guidance.

c. The *Air Research and Development Command* will—

(1) Provide representation to the Dep SO as agreed to by the Commander, AMC, and Commander, ARDC.

(2) Perform that portion of the program which lies within its assigned area of functional responsibilities, to include scheduling, establishing priorities, and preparing plans, studies, and projects.

(3) Institute procedures to insure compliance with adopted standardization measures within its assigned area of functional responsibilities.

(4) Exercise control over, and provide policy guidance for, specifications and standards activities, including final review and release of all specifications and related documents used by the Air Force. The final review wil include insuring that specifications or standards will not duplicate existing documents.

(5) Budget for ARDC support of the program.

(6) Jointly with AMC, establish procedures, draft regulations, manuals, and instructions, and provide policy guidance.

d. The *Air Force Dep SO* will—

(1) Exercise administrative responsibility for the DOD Standardization program, including arrangements for AMC–ARDC participation in DOD standardization activities.

(2) Prepare the Air Force position on standardization matters including plans and proposals submitted by other departments. Unresolved AMC–ARDC differences in all cases will be reported to Hq USAF.

(3) As appropriate, act as or designate the Air Force point of contact for interdepartmental standardization activities.

(4) Report the Air Force assessment of the worth of projected studies.

(5) Advise appropriate activities of the Air Force of measures required to insure Air Force compliance with adopted standardization measures.

(6) Draft and submit to Hq USAF all standardization reports and plans that require Department of Defense approval.

e. *Other major air commands* will support the program, furnishing such data as may be required for accomplishment of standardization.

6. HOW TO ADDRESS COMMUNICATIONS. Correspondence and inquiries pertaining to Dep SO functions will be directed to the following:

90772 O—57——17

Commander, Air Materiel Command
ATTN: Cataloging and Standardization Div., MCSI, DepSO
Wright-Patterson Air Force Base, Ohio

By Order of the Secretary of the Air Force:

Official:

N. F. TWINING,
Chief of Staff, United States Air Force.

E. E. TORO,
Colonel, USAF,
Air Adjutant General.

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*AFR 81-5
1-4

AIR FORCE REGULATION
No. 81-5

DEPARTMENT OF THE AIR FORCE
Washington, *December 16, 1955*

SPECIFICATIONS AND STANDARDS

Air Force Participation in the Department of Defense Standardization Program

1. PURPOSE. This regulation provides for Air Force participation in the Department of Defense Standardization Program, and applies to all Air Force activities.

2. POLICY. All activities of the Air Force, without reservation, will support and participate in the Department of Defense Standardization Program in compliance with policies and procedures promulgated by Headquarters, USAF.

3. OBJECTIVES. The objectives of the Defense Standardization Program are to improve the efficiency and effectiveness of logistical support and operational readiness of the Army, Navy and Air Force; and to conserve money, manpower, time, production facilities and natural resources. These objectives will be reached by:

a. Adoption of the minimum number of sizes, kinds or types of items and services essential to military operations.

b. Achievement of the optimum degree of interchangeability of the component parts used in these items.

c. Development of standard terminology, codes and drawing practices to achieve common understanding and clear interpretation of the description of items and practices.

d. Preparation of engineering and purchase documents to insure the design, purchase and delivery of items consistent with the scope and purpose of the Defense Standardization Program.

e. Providing the military departments with the most reliable equipment possible by the adoption of materiel which has been evaluated in accordance with established government specifications and standards.

4. PROCEDURES

a. The Office of the Assistant Secretary of Defense (Supply and Logistics) will assign to the military departments responsibility for portions of the program. The assignments will be consistent with departmental capacity and supply interest, with due regard to departmental mission. Assignment will be made:

(1) For supply items, by classes in the Federal Supply Classification system.

(2) For General Engineering Standards, by practices, processes, codes, standard terminology, etc., required for logistic support.

b. For each portion of the program assigned, the responsible military department will develop a detailed plan for the achievement and maintenance of standardization in that area in collaboration with other interested departments. The plan will include provision for appropriate work assignments, or reassignments to other departments, where appropriate. The initial efforts will be directed toward the elimination of unneeded items currently in the supply system (simplification). The next step shall consist of an analysis of the remaining varieties, types, kinds and sizes of items based on engineering criteria,

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*This regulation supersedes AFR 81-5, 2 June 1953.

needs, uses, military characteristics and other fundamental factors. The purpose of this process is the further elimination of items or the development of new standard items to replace existing items. The plan will include full consideration of industry practices and will insure coordination with appropriate segments of industry. Detailed plans so developed will provide for the following:

(1) Methods for achieving simplification in each assigned area to eliminate varieties excess to current or planned requirements.

(2) Development of standards and specifications for items, materials, equipments and services concurrently with, or apart from, simplification actions.

(3) Development and preparation of all necessary engineering standards.

c. The plan for standardization developed pursuant to assignment will include the necessary procedures by which the standardization is to be achieved. These procedures will insure that the essential requirements of all services are accommodated in the standardization achieved. These procedures may provide for the achievement of standardization by an individual military department, by joint task groups, or, in the case of commodities where the art is rapidly developing, through the use of standing committees. Where practicable and desirable, industry advisory committees will be established to assist in standardization.

d. The determination as to the desirability of, and the priority of, standardization projects will be made on the basis of resulting identifiable benefits. Therefore, a factual evaluation of benefits to be derived from standardization project will be made before the project is undertaken. These benefits will be balanced against the cost of completing the project, and its initiation and priority determined accordingly. It is recognized that benefits and costs may not lend themselves to dollar measurements. Appropriate values will be assigned to non-dollar benefits and costs. In assessing the benefits to be derived from standardization, consideration consistent with other approved DOD programs and policies will be given to the degree to which standardization contributes:

(1) Facilitating the determination of logistics requirements.

(2) Facilitating procurement through—

(a) The consolidating of purchasing requirements.

(*b*) Increasing sources of supply.

(c) Establishment of the appropriate level of performance.

(d) Improvement of design and productibility of items of supply.

(3) Improving logistic support.

(4) Providing significant logistic or engineering benefits or dollar savings.

(5) Facilitating interdepartmental cross-servicing.

(6) Reducing distribution and maintenance costs.

(7) Saving of materials on the DOD conservation list.

e. Programs developed by the military departments pursuant to assignments of responsibility shall be submitted for review to the OASD (S&L) through the Deputy Chief of Staff, Development, Hq USAF.

f. Differences among the military departments in any phase of the program, which cannot be reconciled by the assigned department, will be referred to OASD (S&L) for resolution.

g. The Assistant Secretary of Defense (Supply & Logistics) is the single Department of Defense contact point for coordinating standardization, specification, and packaging matters with the General Services Administration.

5. Responsibilities. Responsibilities for Air Force participation in the Department of Defense Standardization Programs are set forth in Air Force Regulation 20–14.

6. Applicable Directives. The procedures governing specifications and standards are set forth in AFR 81–1 and in the standardization manuals, issued by the Office of the Assistant Secretary of Defense (Supply & Logistics), which are enumerated below:

a. Military Manual for Specifications, DSMA M–2.

b. Manual for Military Standardization and Standardization Studies, DSMA M–3.

c. Manual for Military Qualified Products Lists, DSMA M–4.

d. Military Outline of Form and Instructions for the Preparation of Specifications, DSMA M–5.

e. Military Outline of Form and Instructions for Preparation of Standard, DSMA M–6.

f. Military Manual for Standardization, Supply & Logistics Manual, Standardization M201.

g. Military Manual for Specifications, Supply & Logistics Manual, Standardization M202. The policies and procedures delineated in these manuals are applicable under this program; they will not be reproduced in Air Force publications. (The manuals listed above may be obtained from the Commander, Air Materiel Command, Wright-Patterson AFB, Ohio.)

By Order of the Secretary of the Air Force:

N. F. TWINING
Chief of Staff, United States Air Force.

Official:
E. E. TORO
Colonel, USAF
Air Adjutant General

DISTRIBUTION:
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*AFR 81-7
1-4

AIR FORCE REGULATION
No. 81-7

DEPARTMENT OF THE AIR FORCE
Washington, *February 3, 1956*

SPECIFICATIONS AND STANDARDS

Report on Limited Coordination and Interim Specifications and Standards (DD-S&L(M)238)

1. PURPOSE. This regulation reissues and modifies the reporting requirements on limited coordination and interim specifications and standards as required by the Standardization Division, Office of the Assistant Secretary of Defense (Supply and Logistics). It applies to the Air Research and Development Command, and the USAF Member of the Aeronautical Standards Group.

2. RESPONSIBILITIES. The report will be compiled by the Commander, Air Research and Development Command, and will be submitted directly to the Standardization Division, OASD (S&L), with an information copy of both Headquarters, USAF, Attn: Assistant for Standardization, DCS/Development, and the Commander, Air Materiel Command, Attn: Cataloging & Standardization Division, MCSI, DepSO. The services of the Aeronautical Standards Group may be utilized for compiling all, or a portion, of the report.

3. REPORTING REQUIREMENTS. The report will list the numbers, dates, titles and custodians of all limited coordination and interim documents issued or cancelled during the previous month.

a. The listing shall include—

(1) *Limited Coordination Specifications*
(a) New specifications.
(b) Revisions of specifications. (Those issued in lieu of existing coordinated specifications will be marked, "issued in lieu of.")
(c) Amendments.
(d) Specifications superseded by those of a different number.
(e) Specifications cancelled.
(2) *Limited Coordination Standards*
(a) New standards.
(b) Revisions of standards.
(c) Standards cancelled.
(3) *Interim Federal Specifications*
(a) New specifications.
(b) Revisions.
(c) Amendments.
(d) Federal specifications superseded by those of a different number.
(e) Federal specifications cancelled.
(4) *Interim Federal Standards*
(a) New Standards.

*This regulation supersedes AFR 80-3, 12 January 1956.

(b) Revisions.
(c) Standards canceled.

4. REPORTING DATES. By the 15th of each month the report in duplicate will be due in the Standardization Division, Office of the Assistant Secretary of Defense (Supply and Logistics). The first report will cover tne month of December 1955.

By order of the Secretary of the Air Force:

Official:
E. E. TOBO
Colonel, USAF
Air Adjutant General

N. F. TWINING
Chief of Staff, United States Air Force.

AMC REGULATION
NR 81–3
ARDC REGULATION
NR 81–1

HEADQUARTERS, AIR MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE
HEADQUARTERS, AIR RESEARCH AND
DEVELOPMENT COMMAND
Baltimore, Maryland
7 February 1956

SPECIFICATIONS AND STANDARDS

AMC-ARDC Participation in the Department of Defense Standardization Program

1. PURPOSE. To assign responsibilities for participation in the Department of Defense Standardization Program as directed by Department of Defense (DoD) Directive 4120.3 and other applicable documents.

2. SCOPE. This Regulation is applicable to all components of the Air Research and Development Command (ARDC) and the Air Materiel Command (AMC) engaged in the Department of Defense Standardization Program.

3. DEFINITION. The term "specifications and standards" as used herein includes the following: specifications, standards (book and sheet form), specification sheets, specification bulletins, drawings, qualified products lists, and indexes of such items.

4. APPLICABLE DOCUMENTS: Public Law 436 (82d Congress), DoD Directive 4120.3 (reproduced as appendix A in DoD Manual M 201 and as attachment 1 to AFL 67–5), DoD Manual M 201 and others in the M 200-series; AFR's 20–14, 23–2, 23–8, 67–20, 81–1, and 81–5, and AFL 67–5.

5. GENERAL. In DoD Manual M 201, "Military Manual for Standardization" and DoD Directive 4120.3, it is recognized that effort in the standardization program consists of two aspects, where standardization potential exists in a specific FSC class: item standardization, and engineering standardization. The Air Force method of complying with these distinct phases of standardization will be as follows:

a. Management of each phase will rotate to the cognizant command.

b. Preparation of the required preliminary reports and detailed plans will be accomplished by AMC. An exception will be for those FSC's wherein no item standardization is involved. In such instances ARDC will prepare the detailed plan, if applicable.

c. The item standardization portion of each standardization project will be assigned to AMC immediately after notification of project assignment by the Office of the Assistant Secretary of Defense (OASD (S. and L.)). Implementation and authentication of the item standardization phase will be accomplished by AMC. Following completion of this phase, it will be submitted to ARDC for integration and completion of the engineering standardization phase.

d. ARDC will review and authenticate the engineering standardization phase.

e. ARDC and AMC will assist each other as required in the item standardization and engineering standardization phases of the program in accordance with AFR's 23–2 and 23–8.

6. POINTS OF CONTACT:

a. The Air Force Departmental Standardization Office (AF DepSO), within the Cataloging and Standardization Division (MCSI), Directorate of Supply, Hq AMC will be the Air Force point of contact with OASD (S and L), the Army DepSO, and the Navy DepSO except as stated in paragraphs 6d (2) and (3).

b. MCSI, Hq AMC, will be the AMC point of contact with the Standardization Division (RDTES), Directorate of Engineering, Hq ARDC, for policies and procedures. MCSI will be the AMC point of contract with the Hq ARDC Standardization Office, Wright-Patterson Air Force Base, for corrective action on documents received by that Office from AMA's and AF depots which are found to not be in accordance with directives issued.

c. The Standardization Division (RDTES), Directorate of Engineering, Hq ARDC, will be the point of contact with MCSI, Hq AMC, for policies and procedures.

d. The Hq ARDC Standardization Office will be the point of contact:

(1) For ARDC with the AF DepSO for engineering standardization of projects and studies.

(2) For the Air Force with the technical services of the Army and bureaus of the Navy for interdepartmental coordination of specifications and standards.

(3) For the Air Force with the OASD (S and L) for release of specifications and standards.

(4) For ARDC with AMC components.

7. RESPONSIBILITIES:

a. The AF DepSO, in addition to the responsibilities assigned by AFR 20–14, will specifically—

(1) Monitor, in behalf of Hq USAF, the Air Force participation in the DoD Standardization Program.

(2) Maintain the official channel of communication between the Air Force, the other departmental DepSO's and OASD (S and L) with respect to the administration of the DoD Standardization Program except as stated in paragraphs 6d (2) and (3).

(3) Determine and assign the item standardization phase and the engineering standardization phase to the AMC and ARDC, respectively, for each OASD (S and L) standardization assignment.

(4) Develop and disseminate guidance for Air Force components in the preparation of required reports and plans. Such reports and plans will be subject to the review and approval by ARDC of the engineering standardization phase of the program.

(5) Establish the format for, and prepare reports on, the DoD Standardization Program as required by DoD Manual M 201 and No. AFR 67–20, and as directed by the Hq USAF Domestic Standardization Division (AFDDS–1). Such reports will be based on data furnished by ARDC, AMC components, and the other departments.

(6) Administer ARDC and AMC task group representation on standardization studies to cover the two phases of the program and maintain current directory of contact points and task group membership.

(7) Assure that AMC item standardization studies are forwarded to the Hq ARDC Standardization Office for review.

(8) Assign official project numbers to all OASD (S. and L.) projects for which the Air Force is the assignee.

(9) Establish a system for assessing and maintaining program costs.

(10) Maintain a current standardization record file for all projects of interest to the Air Force.

(11) Authenticate required reports and plans and forward to the Standardization Division. OASD (S. and L.), for DoD review and approval. Furnish an information copy to Hq USAF, the Hq ARDC Standardization Office, and the Army DepSO and Navy DepSO, as applicable.

(12) Notify the assigned activity when approvals of such reports and plans are received from OASD (S. and L.).

(13) Assure that the Hq ARDC Standardization Office and pertinent AMC activities receive applicable information pertaining to the DoD Standardization Program.

(14) Provide a coordinating committee member for authenticating the completed item standardization phase of the standardization project.

(15) Maintain objectives of the DoD Standardization Program for standardization within assigned FSC responsibilities.

b. ARDC will:

(1) Be responsible for engineering phases of standardization studies and projects required of the Air Force.

(2) Provide the AF DepSO with the Air Force position on all DoD Manuals pertaining to specifications and standards.

(3) Assign all MIL and interim Federal specificaions numbers and all MIL sheet form standard numbers.

(4) Furnish ARDC representation for task groups and committees on the engineering standardization phase of OASD (S and L) projects and assist in the item standardization phase when it has become evident that engineering determinations are required.

(5) Prepare the detailed plan when it becomes evident from submittal of the preliminary report that only engineering standardization is involved and assessment of the FSC class indicates standardization potential.

(6) Coordinate the engineering standardization phase of the DOD Standardization Program with using major air commands and with industry where appropriate.

(7) At time of coordination on the detailed plan for a class—

(a) Indicate those specific commodity areas within a class for which a standardization potential is considered nonexistent.

(b) Furnish to the AMC prime AMA or AF depot the nature of identification and application information required for each commodity area during the engineering standardization review.

(8) Receive and review the draft of the item standardization portion of the summary report furnished by AMC prime AMA or AF depot under paragraph 7c (8), and provide the engineering standardization information for completion of the summary report.

(9) Prepare and furnish to the AF DepSO the engineering standardization data required for—

(a) The Department of Defense Standardization Accomplishment report required by AFR 67–20 which will be furnished on a monthly basis, under Reports Control Symbol AMC–8149. The report will cover the preceding monthly activity. It will be forwarded to reach AF DepSO not later than the 10th day of the month following the reporting period. The report will be as of the end of each month and reflect the preceding monthly activity.

(b) The progress reports required by DoD Manual M 201:

(c) Other reports as directed by Hq USAF, AFDDS–1.

(10) Prepare and provide the AF DepSO with the ARDC cost accounting data for the engineering standardization portion of the DoD Standardization Program as required by OASD (S and L).

(11) Provide to the AF DepSO current directory information of ARDC task group members (by name, address, and telephone extention) who may be contacted for engineering information relative to each engineering standardization project.

(12) Upon approval of the summary report by OASD (S and L) and notification by the AF DepSO, implement the engineering standardization portion of the summary report in accordance with paragraphs 6.6 and 6.7, chapter 6, DOD Manual M 201.

(13) Insure that items related one to another in respect to utilization or application are fully coordinated during engineering standardization, i. e., screwdrivers and screws; bedsteads and mattresses; cameras and films.

(14) Furnish to the AF DepSO the following engineering standardization information:

(a) Project initiation and scheduling.

(b) Project cancellation.

(c) Request for changes in project schedules.

(d) Accomplishments contributing to and events affecting progress of projects.

(15) Maintain objectives of the DoD Standardization Program for engineering standardization within assigned FSC responsibilities.

c. The Air Materiel Command will perform that portion of the DoD Standardization Program which lies within its assigned area of functional responsibilities. Within the functional area, the following will be performed on a decentralized basis:

(1) Prepare and submit to the AF DepSO a proposed schedule of preliminary reports by fiscal years and quarters thereof.

(2) Prepare preliminary reports on FSC project assignments in accordance with DoD Manual M 201. Concurrently with the development of preliminary reports, initiate action to obtain data necessary to compile the detailed plan. Include in the consolidated data an indication of those spe-

cific commodity areas within a class for which a standardization potential is considered nonexistent. Assemble all data collected for detailed plan and coordinate with ARDC to provide the Air Force position.

(3) Upon notification by the AF DepSO of the Standardization Division, OASD (S and L), approval of the preliminary report, develop a detailed plan in accordance with DoD Manual M 201, and forward the plan to the AF DepSO for review and authentication.

(4) Upon receipt from AF DepSO of approval of the detailed plan, accomplish item standardization in accordance with agreements in the approved detail plan.

(5) Form task groups, as required, and call conferences for the accomplishment of item standardization only when other means of communication are not feasible.

(6) Furnish, to AF DepSO, pertinent information on item standardization actions, agendas, minutes of conferences, travel report, correspondence, notes on telephone transactions, and any other significant developments which will be instrumental in providing for current DepSO documentation.

(7) Prepare and provide to the Hq ARDC Standardization Office a draft of the item standardization portion of the summary report for each assigned FSC class. This portion will identify all items which were considered in the project, all items which have been eliminated, and all items which will be retained. Further, this report will be accompanied by recommendations as to the preparation, amendment, or revision of specifications.

(8) For each of those items which will be retained under paragraph 7b (8), provide the Hq ARDC Standardization Office with the necessary identification and application information required for engineering standardization. For each commodity area the determination of data required will be obtained from the Hq ARDC Standardization Office at the time the detailed plan is coordinated.

(9) Upon receipt of Hq ARDC Standardization Office recommendations for engineering standardization, prepare the summary report in final form and submit to the AF DepSO.

(10) Upon notification by the AF DepSO of the Standardization Division, OASD (S&L) approval of the summary report:

(a) Implement the summary report in accordance with chapter 6, DoD Manual M 201, excluding paragraphs 6.6 and 6.7.

(b) Take action to reclassify as obsolete, in accordance with AFR 80–6 where applicable, those Air Force items which have been eliminated.

(11) Actively participate in collaboration with another military department on item standardization when it is the assignee and the Air Force has an interest.

(12) When appropriate, coordinate item standardization projects with industry.

(13) Prepare and furnish to AF DepSO the item standardization data required for—

(a) The Department of Defense Standardization Accomplishment Report required by AFR 67–20 which will be furnished on a monthly basis, under Reports Control Symbol AMC–S149. The report will cover the preceding monthly activity. It will be forwarded to reach AF DepSO not later than the 10th day of the month following the reporting period. The report will be as of the end of each month and reflect the preceding monthly activity.

(b) The progress reports required by DoD Manual M 201.

(c) Other reports as directed by Hq USAF, AFDDS–1.

(14) Prepare and provide to the AF DepSO the AMC cost accounting data for the item standardization portion of the DoD Standardization Program as required by OASD(S and L).

(15) Coordinate with the appropriate using major air commands to establish and Air Force position on item standardization for those equipments which also had required classification in accordance with AFR 80–6.

(16) Insure that items related one to another in respect to utilization or application are fully coordinated during items standardization; i. e., screwdrivers and screws; bedsteads and mattresses, cameras and films.

(17) Maintain objectives of the DoD Standardization Program for item standardization within assigned FSC responsibilities.

By Order of the Commander:

OFFICIAL:

J. L. TARR
Colonel, USAF
Adjutant

By Order of the Commander:

OFFICIAL:

R. C. LEWIS
Colonel, USAF
Adjutant

J. W. SESSUMS, Jr.
Major General, USAF
Vice Commander

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*AFR 81-1
1-3

AIR FORCE REGULATION No. 81-1

DEPARTMENT OF THE AIR FORCE
Washington, *August 3, 1956*

SPECIFICATIONS AND STANDARDS

Policies and Procedures Governing Specifications and Standards

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PURPOSE: *This regulation describes the Air Force specifications and standards program and gives the related policies, procedures and responsibilities. It neither modifies the responsibilities nor applies to the purchase descriptions contained in Air Force Procurement Instruction and in AFR 5-25. Also, it does not apply to public works program construction nor to real property maintenance of installations.*

1. AIR FORCE POLICIES. To take advantage of standardization the Air Force will:

a. Participate in developing, and comply with, the policies and procedures of the Department of Defense Standardization Program;

b. Recommend to the Assistant Secretary of Defense (Supply and Logistics) specific items and areas suitable for standardization;

c. Provide adequate and appropriate specifications and standards as may be required;

d. Insure that we do not compromise the minimum essential requirements for quality and performance for the sake of achieving standardization;

e. Prepare specifications and standards which follow as closely as possible (or adopt in whole or in part when determined applicable) the published standards, specifications, and test methods of technical societies and commercial bodies of national scope;

f. Insure that existing specifications, standards and test methods meet minimum Air Force requirements in whole or in part;

g. Exclude exacting requirements and special features within specifications and standards unless they are required for proper characteristics of the material, product, or service, or to foster interchangeability of components and parts;

h. When practicable, obtain industry comments on specifications and standards before releasing them for production procurement.

2. DEFINITIONS. For better understanding of the regulation these terms are defined:

A Specification—A clear and accurate description of the technical requirements for a material, process, product, or service, including the procedure by which one can determine that the requirements are met.

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*This regulation supersedes AFR 81-1, 24 August 1954.

A Standard—A document which establishes engineering and technical limitations and applications for materials, processes, products, methods, designs, drafting room practices, other engineering practices, and related criteria necessary to achieve a high degree of uniformity in materials and products as well as interchangeability of parts used in these products.

A Qualified Products List—A list of products qualified under the requirements stated in the applicable specification.

A Product—An item of equipment, a detailed part, subassembly, accessory, component, or system.

Standardization—The establishment of essential characteristics of various materials, products, and services required by a military department to accomplish its mission.

3. INTERNATIONAL STANDARDIZATION PROGRAM. The Air Force, Army, and Navy are engaged in an international standardization program. Some of the agreements reached under this program relate to domestic specifications and standards. When specifications and standards governed by this regulation relate to international agreements, activities will annotate them in accordance with Department of Defense Manuals or other instructions. Specifications and standards so annotated will not be revised without consulting the basic international agreement (AFR 81–6).

4. TYPES OF SPECIFICATIONS. The following paragraphs describe the types of specifications which are authorized for use in Air Force procurement. The order of precedence in their use is contained in Air Force-Navy Aeronautical (ANA) Bulletin 143, titled "Specifications and Standards; Use of." Military and Federal specifications and the procedures for their development are described in detail in manuals published by the Assistant Secretary of Defense (Supply and Logistics) and are further amplified in AFM 81–1.

a. *Federal Specifications*—Federal specifications, issued by General Services Administration, cover commercial materials, processes, products and services commonly procured by two or more Federal departments. When a Federal specification is published it supersedes all military specifications for the same material, process, product or service except when military requirements are more stringent. Its use is mandatory on all departments where applicable. Military departments may issue interim Federal specifications in accordance with procedures prescribed by the Federal Supply Service, GSA. Part I, section IV, of the Federal Specification Index, Federal Standard Stock Catalog, lists all Federal specifications.

b. *Fully Coordinated Military Specifications*—These are military specifications which have been coordinated by the Departments of the Army, Navy and Air Force. The Department of Defense establishes the requirement and the procedures for their coordination. When a fully coordinated military specification is published it supersedes any limited coordination specification for the same material, product or service. Its use is mandatory on all departments where applicable.

c. *Limited Coordination Military Specifications*—There are two types of limited coordination military specifications primarily used by the Air Force, the MIL–(USAF) and the MIL–(ASG). MIL–(USAF) specifications are written on items of interest only to the Air Force or on items for immediate procurement needs. MIL–(ASG) specifications are written on aeronautical materials, processes, products and services and have been coordinated by the Air Force and the Bureau of Aeronautics, Navy.

Limited coordination specifications of the Army technical services or bureaus of the Navy may be used when they are lisited in volume IV, Index of Specifications and Related Publications, or when specifically released by ARDC.

d. *Specifications of Other Government Agencies*—Activities may use specifications of other Federal agencies. However, their use is authorized only when they are listed in volume IV, Index of Specifications and Related Publications, or when specifically approved by ARDC for a particular use.

e. *Specifications of Nongovernment Standardization Agencies*—When government specifications are not available, established specifications of nongovernment standardization organizations may be used if they are listed in ANA Bulletins 147 or 343 or if ARDC specifically approves them for a particular Air Force use.

5. TYPES OF STANDARDS. The following paragraphs describe the types of standards authorized for Air Force use:

a. *Federal Standards*—These are standards prepared by the Federal Supply Service, General Services Administration. They cover items which are common to two or more Federal agencies.

b. *Military Standards*—Military standards and the procedure for their development are described in detail in manuals published by the Assistant Secre-

tary of Defense (Supply and Logistics). Their use is mandatory on all military departments where applicable.

Military standards are prepared in one of these two formats:

(1) MIL–STD—Normally military standards in this format are prepared in book form. However, they may be prepared in unit page form when the standard requires only one sheet of textual or graphical presentation or both. These standards include engineering practices, charts, categories of dimensional and functional details, graphs, formulas and lists.

(2) MS–Sheet Form—This format is a combination graphical and tabular presentation with explanatory notes when necessary. The MS–sheet form covers physical items and design features. Standards produced in this form are limited to those dimensional and functional details required for interchangeability of the item.

Military standards are further divided administratively into *coordinated standards* and *limited coordination standards*. Coordinated standards cover items or areas of use common to more than one department and in which all interested activities have concurred. Limited coordination standards are those which a single department or activity prepares and issues. They are intended to cover an area or satisfy an immediate need unique to that department. Ultimately they may become common to more than one department.

Activities will not issue limited coordination standards which cover engineering practices or when a coordinated standard exists covering the same item.

c. *ANA Standards*—These are existing Air Force-Navy aeronautical standards which have been coordinated between the Air Force and the Navy Bureau of Aeronautics by the Aeronautical Standards Group (ASG). New standards are issued in the MS-sheet form series.

d. *Air Force Standards*—Air Force standards are those which, in addition to limited coordination standards, have been prepared by the Air Force and have not been coordinated with the other military departments.

AFR 81–4 describes ANA and Air Force standard sheets in more detail. Here, however, are examples of the types of standards, with samples of their identifying numbers:

Types of Standards	*Identifying Numbers*
Military Standards (book form)	MIL–STD–3
Military Sheet Form Standards	MS20000
Military Sheet Form Standards (Limited Coordination Type)	MS21000(ASG)
ANA Standard Sheets	AN505
Air Force-Navy Design Standards	AND20002
Air Force Standards Sheets	529

6. Coordination and Cooperation With Other Agencies. The Air Force establishes and maintains representation with both government and nongovernment agencies. These are some of the agencies with which the Air Force maintains this contact:

a. *General Services Administration.* As mentioned, GSA issues Federal specifications and standards. Department of Defense directives govern Air Force relations with this agency.

b. *Standardization Division, Office of the Assistant Secretary of Defense (Supply and Logistics).* Through this division the Air Force participates with Army and Navy in formulating military and Federal specifications and standards and qualified products lists.

c. *Interdepartmental Screw Thread Committee.* Air Force members on this committee cooperate with the Departments of Army, Navy, and Commerce in establishing screw thread standards.

d. *Department of Commerce.* The Air Force cooperates with the Commodity Standard Division, National Bureau of Standards, Department of Commerce, in establishing commercial standards and recommending simplified practices.

e. *Other Federal Agencies.* The Air Force cooperates with all Federal agencies in an effort to simplify, standardize, and conserve critical materials.

f. *Technical Societies.* The Air Force maintains nonvoting participation on committees of technical societies and associations concerned with specifications and standardization.

7. Headquarters USAF Responsibilities. The Deputy Chief of Staff, Development establishes policies and procedures to insure that the Air Force specification and standards program conforms with interdepartmental standardization policies of the Assistant Secretary of Defense (Supply and Logistics), with Joint Chiefs of Staff policies, with American, British, Canadian (ABC) Standards and with North Atlantic Treaty Organization (NATO) agreements.

8. ARDC RESPONSIBILITIES. The Air Research and Development Command will prepare specifications and standards for materials, products and services. This command will provide policy guidance and exercise control over specifications and related documents used by the Air Force. The final review will insure that proposed specifications and standards have been coordinated with interested activities and do not duplicate existing documents. ARDC will also:

a. Establish and maintain liaison with appropriate government and non-government agencies to effect maximum technical coordination;

b. Review AMC forms covering line items forecast for procurement by AMC, and, in this regard:

(1) Determine whether existing specifications and standards are available and adequate;

(2) Prepare new specifications and standards suitable for quantity procurement as required;

(3) Advise AMC of those items for which procurement data will not be available, with reasons therefor. If possible, recommend interchangeable or substitute items for which procurement data will be available.

c. Prepare suitable reproduction copies of indexes of government specifications and standards used by the Air Force.

d. Furnish AMC suitable reproduction copies of all military specifications and complementary documents prepared by the Air Force and released for procurement.

9. AMC RESPONSIBILITIES. AMC will prepare, coordinate, and secure approval of all Air Force specifications and standards which pertain to:

a. Item identification and nomenclature (except type designation systems);

b. Physical item and container marking;

c. Content and format of handbooks and parts catalogs for production and in-service aircraft and equipment (except for Designers' Handbooks, Aircraft Flight Operating Instructions, Cargo Loading Instructions, Basic Weight and Check List Data for Aircraft and Operating Instructions for Guided Missiles, which are ARDC functions);

d. Determination of interchangeability and replaceability of parts (that is, items in the Air Force supply system);

e. Quality control of material, products, and services.

f. Budget for printing of all specifications, standards, indexes and related publications required by the Air Force.

g. Other related matters which are a part of AMC's mission.

AMC will send all the Air Force specifications and standards which it prepares to the Commander, ARDC for review and release.

In advance of each fiscal year AMC will provide ARDC with AMC forms covering line items of materials and products planned for procurement during that fiscal year.

10. BULLETINS. USAF Specification Bulletins give informational data that are related to specifications and standards. They are issued by AMC when coverage by specifications and standards would not be appropriate.

11. INDEXES. AMC now publishes in a single volume the separate indexes (basic unclassified index and classified appendix) of all classified and unclassified government specifications and book form standards used by the Air Force. They are arranged both alphabetically and numerically and issued semiannually with monthly supplements. The volume is known as *Military Index, Volume IV*, entitled *Index of Specifications and Related Publications (used by) U. S. Air Force.*

All standard sheeets are listed in the "Numerical and Alphabetical Index of U. S. Air Force-Navy Aeronautical and Military (MS) Standards." The numerical index is issued monthly; the alphabetical index semiannually.

12. DISTRIBUTION OF INDEXES, BULLETINS, SPECIFICATIONS, STANDARDS, AND DOD MANUALS. Headquarters AMC will automatically distribute these data which are approved for Air Force use when requirements are substantiated and approved through channels in accordance with Technical Order 00-35-2.

Commanders will delegate one office at each depot or base to submit requisitions and to receive and distribute these data. The designated office will send requests to Commander, Air Materiel Command, Wright-Patterson Air Force Base, Ohio, ATTN: MCSIFF.

If resupply of DOD manuals becomes necessary, Headquarters, AMC will submit a reprint request to the Air Adjutant General accompanied by three sample copies of the manual.

Normally, AMC stocks only those governmental specifications and standards which are approved for Air Force use. However, Air Force activities may obtain those of other government agencies or those of nongovernment standardization organizations through AMC in accordance with the procedures outlined in Technical Order 00-35-2.

Specifications, except indexes, will not be furnished on an automatic basis to industry. Industrial sources requiring specifications may submit correspondence to Commander, Air Materiel Command, ATTN: MCSIFF, requesting, by number and title, those specifications necessary to accomplish Air Force contract. The Military Index, Volume IV, "Index of Specifications and Related Publications (Used By) U. S. Air Force," together with its monthly supplements, may be used by industry to determine currency of specifications in their possession.

Classified specifications and standards will be requisitioned and issued in accordance with AFR 205-1.

By Order of the Secretary of the Air Force:

OFFICIAL:
E. E. TORO
Colonel, USAF
Air Adjutant General

DISTRIBUTION:
B

N. F. TWINING,
Chief of Staff, United States Air Force.

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*AFR 67-20
1-4

AIR FORCE REGULATION No. 67-20

DEPARTMENT OF THE AIR FORCE
Washington, *July 23, 1956*

SUPPLY

Report on DOD Standardization (Including Packaging)

Program—RCS: DD S&L (SA) 151

PURPOSE: *This regulation assigns responsibilities for submitting certain reports on standardization of supply items to Headquarters USAF. It applies to Air Materiel Command and Air Research and Development Command.*

1. BACKGROUND. The report to be submitted to Headquarters USAF is titled "Report on the DOD Satndardization (Including Packaging) Program—RCS: DD S&L (SA) 151." The format for this report is attached to this regulation and is self explanatory. The reports will provide information on supply standardization and significant achievements effected by supply standardization. This information is required by the Department of Defense for report to Congress in accordance with the Defense Cataloging and Standardization Act, P. L. 436, 82d Cong. (66 Stat. 320; 5 U. S. C. 173g)—contained in AFBul 22, 1952.

2. DATA TO BE INCLUDED IN THE REPORT. The report is designed to reflect interdepartmental accomplishments; however, departmental accomplishments in reducing the number of sizes, kinds, or types of generally similar items will be described and reported.

3. RESPONSIBILITIES. Air Materiel Command and Air Research and Development Command will establish a system for collecting and maintaining data required for the report.

a. The Commander, Air Research and Development Command, will forward data reflecting the progress of his command to the Commander, Air Materiel Command, ATTN: Cataloging and Standardization Division, MCSI, DepSO.

b. Air Materiel Command will—

(1) Consolidate the report, in accordance with the attached format.

(2) Submit 25 copies of the consolidated report to the Deputy Chief of Staff, Development, Headquarters USAF, ATTN: Assistant for Standardization.

(3) Submit the reports covering the period 1 June to 30 November not later than 24 December of each year, and the reports covering the periods 1 December to 31 May not later than 23 June of each year.

4. SUBMISSION OF REPORT TO OFFICE, SECRETARY OF DEFENSE. After approval, the Secretary of the Air Force will submit the report to the Assistant Secretary of Defense (Supply and Logistics).

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*This regulation supersedes AFR 67-20, 5 July 1954, including Changes 67-20A, 18 November 1955 and 67-20B, 30 March 1956.

By Order of the Secretary of the Air Force:

Official:

N. F. TWINING,
Chief of Staff, United States Air Force.

E. E. TORO,
Colonel, USAF
Air Adjutant General

Attachment:
Format for Report on DOD Standardization (Including Packaging) Program

AFR 67-20

FORMAT FOR REPORT ON THE DOD STANDARDIZATION (INCLUDING PACKAGING) PROGRAM; RCS: DD S&L (SA) 151

The following material is requested from each military department for use in semiannual reports to the Congress on the standardization program as required by Public Law 436, 82d Congress. The semiannual reports cover the periods between 1 July to 31 December and 1 January to 30 June. It is emphasized that the material to be supplied by the departments shall report the accomplishment within the six-month period immediately preceding. Some overlap with material previously supplied is probable and in certain cases necessary. However, careful accounting will insure crediting the proper period for accomplishment without repetition. Where standardization is reflected in a coordinated document such as a specification or standard, the date of approval of the document will be presumed to show in what reporting period the standardization action reached fruition. Material showing partial accomplishment of standardization may be reported, but it must be clearly identified as such. Unless they are of special significance or scope, the material should not include projects in stages of planning or early development.

A. *Number of separate specifications which have been consolidated into a single specification:* To be submitted by the department in which the preparing activity of the superseding specification is located. Accomplishments of joint agencies will be included in the material submitted by the department having management or administrative control thereof.[1]

	Military	*Limited Coordination Military*	*Federal*	*Interim Federal*	*Total*
1) Number of specifications superseding at least two others.					

	Bureau, Service, or Command	*Departmental*	*Military*	*Federal*	*Total*
2) Number of superseded specifications.					

B. *Reduction achieved in the number of sizes, kinds, or types of generally similar items:* To be submitted by the department in which is situated the preparing activity responsible for the specification or standard or the activity responsible for monitoring simplification studies. The department is to include in its material the reductions effected in the other military departments as well as the reductions within its department. It is recommended that the data be collected and recorded throughout the reporting period in connection with the coordination of the specification, standard, or simplification study. Accomplishments of joint agencies will be submitted as such by the department having management or administrative control thereof.*

1. A brief narrative statement will be included summarizing each significant accomplishment which resulted in a reduction in the number of items authorized for future procurement and which is supported by coordinated or limited coordination specifications or standards, or other implementing document. Each statement should include the following type of data, whenever obtainable:

a. Number of items before the simplification or standardization action.

b. Number of items after the simplification or standardization action.

c. If a. and b. are not obtainable, give the net reduction of the number of items which will result from such actions.

[1] Accomplishments of the Aeronautical Standards Group will be submitted by the Department of the Air Force.

d. Estimated annual savings resulting therefrom; include the computations in order to explain how estimates were derived. Itemized estimated annual savings as follows:

(1) Savings in dollars resulting from procurement (based on current procurement rate).

(2) Savings in man-hours resulting from reduced handling during procurement, storage, and issue.

(3) Savings in cubic feet of space as a result of reduced inventories which stem from the above reduction in the number of items. (See paragraphs B–1.a., B–1.b., and B–1.c.)

(4) Reduction in dollar volume of inventory requirements.

(5) Savings in dollars resulting from reduced number of items in the supply systems.

C. *Accomplishments achieved through improvement in designs and practices.* To be submitted by the department in which is situated the preparing activity responsible for accomplishing standardization other than that covered in paragraph B. A brief narrative statement will be included summarizing each significant accomplishment which resulted in savings or benefits due to improvement in combat effectiveness, reduction in training of operators and maintenance personnel, reduction in use of strategic or critical materials, and broadening of the procurement base. Itemize estimated annual savings as follows and include computations to explain how estimates were derived:

1. Savings in dollars resulting from procurement (based on current procurement rate).

2. Savings in man-hours resulting from improved operation and maintenance.

3. Any other benefits or savings resulting such as reduction of time equipment remains deadlined, reduction of percentage of deadlined equipment, and reduction in time necessary to install or emplace equipment.

4. Savings in use of strategic or critical material resulting from redesign.

5. Savings in dollars or man-hours resulting in standardization of engineering practices and processes.

D. List and explain separately with substantiating data similar to B–1.d., above, each significant packaging standardization accomplishment. Include the computations necessary to adequately portray the estimated savings and benefits which will result therefrom. Where it is not feasible to give estimated savings and benefits in form of computations, describe advantages obtained, such as improvement in methods of preservation, packaging, packing, and marking of supply items and elimination from the supply system of nonstandard packaging material and nonstandard design of shipping containers.

E. *Duplications eliminated in services, space, and facilities:*

1. Include with the brief narrative statements above or describe separately under this heading important benefits and economies in services, space, facilities, dollars, and man-hours achieved through elimination of duplications in services, space, and facilities.

F. *Total Savings:*

1. Savings in dollars, man-hours, services, space, and facilities reported in sections B–1.d., C, and E–1, shall be totaled and reported under this section (F–1) in the terms of the basic units (dollars, man-hours, service, space, and facility). NOTE: It is considered most important that each benefit derived from standardization be expressed in terms of savings based on current annual procurement. If this information is not obtainable, benefits should be expressed in terms of savings based on the rate of procurement for the reporting period. If information for either of the above indicated methods of expression is not available, benefits shall be expressed in terms of savings based on individual specific procurements during the reporting period. Estimated savings should be based on reasonable or known cost factors and the method of computing the savings should be shown.

G. *Other benefits:*

1. A brief narrative statement illustrating other benefits of standardization which are not covered by B, C, D, or E above. Such narratives should frankly recognize that not all standardization results in economies in first cost. Instead, the account should show clearly where a higher first cost is accepted in order to gain such benefits as longer life, improved reliability, insured delivery in operable condition, lighter weight for improved combat utility, better performance with reduced expenditures for fuel or power, simplification for ease in maintenance, and reduction in use of critical material, or any combination of these and other benefits.

EXHIBIT G

*AR 715–50

ARMY REGULATIONS No. 715–50

DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., *29 August 1955*

PROCUREMENT

STANDARDIZATION, SPECIFICATIONS, AND STANDARDS

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SECTION I

RESPONSIBILITIES AND FUNCTIONS OF AGENCIES

1. Scope. *a.* These regulations cover the standardization activities of the Army technical services; the specifications, standards, and standardization handbooks prepared or used by any Army activity; and also cover an outline of the scope, purposes, basic objectives, principles, and policies of the Defense Standardization Program.

*These regulations supersede SR 715–50–1, 2 June 1953.

b. The standardization program is concerned with standardization of material, components, equipment, and processes with respect to items and services approved for use by the Army, the Navy, and the Air Force as well as standardization of engineering practices and procedures essential to design, procurement, production, inspection, application, preservation, and preparation for delivery of items of military supply.

c. For regulations involving responsibilities of agencies concerned with development and type classifications of materiel, and for procedures governing research, development, type classification, and modification of materiel, see SR 705–5–1.

d. For regulations and procedures governing the use of specifications in procurement, see the Armed Services Procurement Regulation and the Army Procurement Procedure.

e. Purchase descriptions are not covered by these regulations. Policy governing the use of purchase descriptions is in the Army Procurement Procedure.

2. Purposes and objectives. *a.* The purposes of the standardization activity within the Department of the Army are to—

(1) Improve the efficiency and effectiveness of logistical support, and operational readiness of the Army, the Navy, and the Air Force.

(2) Conserve money, manpower, time, production facilities, and natural resources.

b. These purposes will be realized by accomplishment of the following objectives:

(1) Adoption of the minimum number of sizes, kinds, or types of items and services essential to military operations.

(2) Achievement of the optimum degree of interchangeability of the component parts used in these items.

(3) Development of standard terminology, codes, and drawing practices to achieve common understanding and clear interpretation of the description of items and practices.

(4) Preparation of engineering and purchase documents to insure the design, purchase, and delivery of items consistent with the scope and purpose of the Defense Standardization Program.

(5) Provision to the military departments of the most reliable equipment possible by the adoption of materiel which has been evaluated in accordance with established Government specifications and standards.

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3. Definitions. For the purpose of these regulations, the following definitions apply:

a. Custodian. The technical service assigned responsibility for the preparation, coordination, issuance, and other related functions pertaining to specifications and standards.

b. Deviation. A change to specification or standard requirements, made prior to award of contract and detailed in the contractual document.

c. Handbook. Handbooks are reference documents used in supply management operations which bring together under one cover general information, procedural, and technical use data which are related to the standardization program.

d. Item. As used in these regulations, the term "item" is a broad term and includes, but is not restricted to, equipments, components, and subassemblies.

e. Joint agency. A full-time chartered joint activity such as the Armed Services Electro Standards Agency, Armed Services Medical Procurement Agency.

f. Military coordinating activity. The military coordinating activity is the activity assigned by the Standardization Division within the Department of the Army, Department of the Navy, or Department of the Air Force which will coordinate, reconcile, and collate military comments on Federal specifications.

g. Preparing activity. The custodian or joint agency charged with the responsibility of preparing a specification, standard, or handbook.

h. Service or services. These terms designate the Army technical services.

i. Simplification. Simplification is the elimination of excess types, grades, sizes, finishes, etc., of products.

j. Specifications. Specifications are documents, intended primarily for use in procurement for items, materials, or services, including the procedures by which it will be determined that the requirements have been met. Specifications for items and materials will also contain preservation, packaging, packing, and marking requirements.

k. Standards. Standards are documents that establish engineering and technical limitations and applications for items, materials, processes, methods, designs, and engineering practices.

l. Waiver. A change to specification or standard requirements, made subsequent to award of contract, which may or may not be reflected in a change to the contractual document.

4. Defense Standardization Program. *a.* In order to achieve the objectives of the Defense Standardization Program, the Assistant

Secretary of Defense (Supply and Logistics) has assigned responsibility for portions of the program to each of the military departments based on classes in the Federal Supply Classification (FSC) system. Assignments for general engineering standards covering codes, practices, terminology, etc., will be made on an individual basis.

b. For each portion of the program assigned, the responsible Army technical service will develop a detailed plan for the achievement and maintenance of standardization in that area in collaboration with other interested activities. The plan will include provision for appropriate work assignments, or reassignments to other departments, where appropriate. The initial efforts will be directed toward the elimination of unneeded items currently in the supply system (simplification). The next step will consist of an analysis of the remaining varieties, types, kinds, and sizes of items based on engineering criteria, needs, uses, military characteristics, and other fundamental factors. The purpose of this process is the further elimination of items or the development of new standard items to replace existing items. The plan will include full consideration of industry practices and will insure coordination with appropriate segments of industry. Detailed plans so developed will provide for the following:

(1) Methods for achieving simplification in each assigned area to eliminate varieties excess to current or planned requirements.

(2) Development of standards and specifications for items, materials, equipments, and services concurrently with, or apart from, simplification actions.

(3) Development and preparation of all necessary engineering standards.

c. The department developing standards and specifications will assure that adequate coordination has been effected with those sections of industry concerned, including potential new suppliers, where appropriate. The impact of the proposed standardization upon the ability of industry to produce in the quantities required must be assessed before final decision to standardize is made. Also, advantage can be taken of industry suggestions for improvement through application of the latest technological advances. It is essential that the industry be aware, at an early stage, of the changing requirements of the Armed Forces and be given an opportunity to evaluate the proposed change in the light of technical soundness; foreseeable costs or procurement delays; need for retooling; new processes or techniques required; training of the labor forces, and the effect upon full and free competition. Coordination will be accomplished with a representative crosssection of industry, including a proper distribution by geography and

size of business, and including both trade association members and unaffiliated companies, and, where appropriate, trade associations, technical societies, and other standardization organizations.

d. In consonance with the regular coordination procedures for specifications and standards, the plan for standardization developed pursuant to assignments may provide for the achievement of standardization by an individual military department, by joint task groups, or, in the case of commodities where the art is rapidly developing, through the use of standing committees. It is expected that members of such task groups and standing committees will be permitted reasonable latitude to resolve issues in committee in order that departmental concurrences will be expedited. Where practicable and desirable, industry advisory committees may be established in accordance with existing procedures to assist in standardization.

e. The determination as to the desirability of, and the priority of, standardization projects will be made on the basis of resulting identifiable benefits. Therefore, a factual evaluation of benefits to be derived from the standardization project will be made before the project is undertaken. These benefits will be balanced against the cost of completing the project, and its initiation and priority determined accordingly. It is recognized that benefits and costs may not lend themselves to dollar measurement. Appropriate values will be assigned to non-dollar benefits and costs. In assessing the benefits to be derived from standardization, consideration consistent with other approved Department of Defense programs and policies will be given to the degree to which standardization contributes to—

(1) Facilitating the determination of logistics requirements.
(2) Facilitating procurement through consolidation of purchasing requirements, increasing sources of supply, establishment of the appropriate level of performance, improvement of design, and producibility of items or supply.
(3) Improving logistic support.
(4) Providing significant logistic or engineering benefits or dollar savings.
(5) Facilitating interdepartmental cross-servicing.
(6) Reducing distribution and maintenance costs.
(7) Saving of materials on the Department of Defense conservation list.

f. Portions of the program developed by the Army technical services pursuant to assignments of responsibility will be submitted to the Deputy Chief of Staff for Logistics for review and will be carried out in coordination with all interested departments in accordance with the plans submitted.

g. Differences among the military departments in any phase of the program, which cannot be reconciled by the assigned technical service, will be referred to the Deputy Chief of Staff for Logistics for resolution.

5. Responsibility. *a.* These regulations apply to all agencies of the Department of the Army.

b. The Assistant Secretary of the Army (Logistics and R & D), charged with supervision of procurement activities, is responsible for the administration of these regulations, including the establishment of policies and the supervision of all standardization activities. This responsibility has been delegated to the Deputy Chief of Staff for Logistics.

c. Unless otherwise assigned, the head of the technical service responsible for a procurement program is responsible for the availability of specifications and standards, which insure that the military characteristics of the material, product, or service, as established by the cognizant technical committee and based on user recommendations, are satisfied. The responsibilities for research and development, and for purchase of a material, product, or service usually are vested in the same service. However, in those instances where the research and development and the purchase functions are separated, or in any doubtful or controversial case as to specification or standards responsibilities, the matter will be referred for decision to the Deputy Chief of Staff for Logistics.

d. A Federal or Military specification or standard will not be prepared when it is determined to be not in the best interest of the Government to do so. Instances where such a determination may be economically sound occur when the volume of procurement is not sufficient to justify the preparation of a specification or standard; when the character of the item is of minor significance and purchasing offers no problems; or for spare parts, components, or materials required for repair or maintenance and operation of existing facilities or installations. However, the foregoing will not be used as a basis for avoiding the necessary and effective use of specifications and standards.

e. Primary (Assignee) standardization responsibility for Army assigned FSC Classes and coordination (Participating) responsibility for FSC Classes where primary standardization responsibility is in another department are assigned to the technical services as shown in table I.

Table I. Standardization Responsibility by Assignee Activity and Participating Activity

(Air Force by Assignee Department Only)

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
1005	Guns, through 30mm (Subass aircraft guns to AF)	Ord		NOrd	
1010	Guns, over 30mm up to 75mm	Ord		NOrd	
1015	Guns, 75mm through 125mm	Ord		NOrd	
1020	Guns, over 125mm through 150mm		Ord	NOrd	
1025	Guns, over 150mm through 200mm		Ord	NOrd	
1030	Guns, over 200mm through 300mm		Ord	NOrd	
1035	Guns, over 300mm		Ord	NOrd	
1040	Chemical Weapons and Equipment	CmlC		NOrd	
1045	Launchers, Torpedo and Depth Charge		Ord	NOrd	
1050	Launchers, Guided Missile	(*)	(*)	(*)	(*)
1055	Launchers, Rocket and Pyrotechnic		Ord	NOrd	
1060	Biological Weapons	(*)	(*)	(*)	(*)
1070	Nets and Booms, Ordnance		TC	NOrd	
1075	Degaussing and Minesweeping Equipment		TC	Ships	
1080	Camouflage and Deception Equipment	CE		Ships	
1090	Assemblies Interchangeable between Weapons in two or more classes	(*)	(*)	(*)	(*)
1095	Miscellaneous Weapons	Ord		NOrd	
1210	Fire Control Directors		Ord	NOrd	
1220	Fire Control Computing Sights and Devices (Subass land-based equipment to Army).		Ord	NOrd	
1230	Fire Control Systems, Complete (Subass land-based equipment to Army).		Ord	NOrd	
1240	Optical Sighting and Ranging Equipment	Ord		NOrd	

*Not assigned.

FSC Class		Army		Other depts	

*Not assigned.

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
1250	Fire Control Stabilizing Mechanisms (Subass land-based equipment to Army).		Ord	NOrd	
1260	Fire Control Designating and Indicating Equipment (Subass land-based equipment to Army).		Ord	NOrd	
1270	Aircraft Gunnery Fire Control Components		Ord	NOrd	USAF
1280	Aircraft Bombing Fire Control Components		Ord	NOrd	USAF
1290	Miscellaneous Fire Control Equipment	Ord		NOrd	
1305	Ammunition, through 30mm	Ord		NOrd	
1310	Ammunition, over 30mm up to 75mm (Subass ship types to Navy)	Ord		NOrd	
1315	Ammunition, 75mm through 125mm (Subass ship types to Navy)	Ord		NOrd	
1320	Ammunition, over 125mm		Ord	NOrd	
1325	Bombs		Ord	NOrd	
1330	Grenades	Ord		MC	
1335	Guided Missiles	(*)	(*)	(*)	(*)
1340	Rockets and Rocket Ammunition		Ord	NOrd	
1345	Land Mines	Ord		MC	
1350	Underwater Mine Inert Components		Ord	NOrd	
1351	Underwater Mine Explosive Components		Ord	NOrd	
1355	Torpedo Inert Components		Ord	NOrd	
1356	Torpedo Explosive Components		Ord	NOrd	
1360	Depth Charge Inert Components		Ord	NOrd	
1361	Depth Charge Explosive Components		Ord	NOrd	
1365	Chemical Warfare Agents	CmlC		NOrd	
1370	Pyrotechnics	Ord		NOrd	
1375	Explosives, Bulk Propellents, and Explosive Devices	Ord		NOrd	

1380	Biological Warfare Agents and Ammunition	CmlC	-------	NOrd	
1385	Atomic Energy Ammunition	(*)	(*)	(*)	(*)
1390	Fuzes and Primers	Ord	-------	NOrd	
1395	Miscellaneous Ammunition	Ord	-------	NOrd	
1510	Aircraft, Fixed Wing	-------	TC	Aer	USAF
1520	Aircraft, Rotary Wing	-------	TC	Aer	USAF
1530	Aircraft, Lighter than Air	-------	TC	Aer	
1540	Gliders	-------	TC	Aer	USAF
1550	Target Drones	-------	Ord	Aer	USAF
1560	Airframe Structural Components	-------	TC	Aer	USAF
1610	Aircraft Propellers	-------	TC	Aer	USAF
1620	Landing Shock Struts	-------	TC	Aer	USAF
1630	Aircraft Wheel and Brake Systems	-------	TC	Aer	USAF
1640	Aircraft Auxiliary Fuel Tanks	-------	TC	Aer	USAF
1650	Aircraft Hydraulic, Vacuum, and De-Icing System Components	-------	TC	Aer	
1660	Aircraft Air Conditioning, Heating, and Pressurizing Equipment	-------	TC	Aer	USAF
1670	Parachutes and Aerial Pickup, Delivery, and Cargo Tie-Down Equipment.	-------	QMC	Aer	USAF
1680	Miscellaneous Aircraft Accessories and Components	-------	TC	Aer	USAF
1710	Aircraft Arresting and Barrier Equipment	-------	TC	Aer	
1720	Aircraft Launching Equipment	-------	TC	Aer	
1730	Aircraft Ground Servicing Equipment	-------	TC	Aer	USAF
1740	Airfield Specialized Trucks and Trailers	-------	Ord	Aer	USAF
1905	Combat Ships and Landing Vessels	-------	TC	Ships	
1910	Transport Vessels, Passenger and Troop	-------	TC	Ships	
1915	Cargo and Tanker Vessels	-------	TC	Ships	
1920	Fishing Vessels	-------	TC	Ships	
1925	Special Service Vessels	-------	TC	Ships	

*Not assigned.

FSC Class		Army	Other depts	

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
1930	Barges and Lighters, Cargo		TC	Ships	
1935	Barges and Lighters, Special Purpose		TC	Ships	
1940	Small Craft		TC	Ships	
1945	Pontoons and Floating Docks		TC	Docks	
1950	Floating Drydocks		TC	Docks	
1955	Dredges	TC		Docks	
1990	Miscellaneous Vessels		TC	Ships	
2010	Ship and Boat Propulsion Components		TC	Ships	
2020	Rigging and Rigging Gear		TC	Ships	
2030	Deck Machinery		TC	Ships	
2040	Marine Hardware and Hull Items		TC	Ships	
2050	Buoys		CE	Ships	
2060	Commercial Fishing Equipment		TC	Ships	
2090	Miscellaneous Ship and Marine Equipment		TC	Ships	
2210	Locomotives	TC		Docks	
2220	Rail Cars	TC		Docks	
2230	Right-of-Way Construction and Maintenance Equipment, Railroad	CE		Docks	
2240	Locomotive and Rail Car Accessories and Components	TC		Docks	
2250	Track Materials, Railroad	CE		Docks	
2310	Passenger Motor Vehicles	Ord		Docks	
2320	Trucks and Truck-Tractors	Ord		Docks	
2330	Trailers	Ord		Docks	
2340	Motorcycles, Motor Scooters, and Bicycles	Ord		Docks	
2350	Tanks and Self-Propelled Weapons	Ord		MC	

2410	Tractors, Track Laying	CE		Docks	
2420	Tractors, Wheeled	CE		Docks	
2430	Tractors, Track Laying, High Speed	Ord		Docks	
2510	Vehicular Cab, Body, and Frame Structural Components	Ord		Docks	
2520	Vehicular Power Transmission Components	Ord		Docks	
2530	Vehicular Brake, Steering, Axle, Wheel, and Track Components	Ord		Docks	
2540	Vehicular Furniture and Accessories	Ord		Docks	
2590	Miscellaneous Vehicular Components	Ord		Docks	
2610	Tires and Tubes, Pneumatic, Except Aircraft	Ord		Docks	
2620	Tires and Tubes, Pneumatic, Aircraft		TC	Aer	USAF
2630	Tires, Solid and Cushion	Ord		Docks	
2640	Tire Rebuilding and Tire and Tube Repair Materials	Ord		Docks	
2805	Gasoline Reciprocating Engines, Except Aircraft; and Components	Ord [1]		Docks	
2810	Gasoline Reciprocating Engines, Aircraft; and Components		TC	Aer	USAF
2815	Diesel Engines and Components		Ord	Ships	
2820	Steam Engines, Reciprocating; and Components		CE	Ships	
2825	Steam Turbines and Components		CE	Ships	
2830	Water Turbines and Water Wheels; and Components	CE		Docks	
2835	Gas Turbines and Jet Engines, Except Aircraft; and Components (Subass shipboard to Navy; subass ground service equipment to USAF).	Ord		Ships	
2840	Gas Turbines and Jet Engines, Aircraft, and Components		TC	Aer	USAF
2845	Rocket Engines and Components		Ord	Aer	USAF
2895	Miscellaneous Engines and Components		Ord	Aer	USAF
2910	Engine Fuel System Components, Nonaircraft	Ord [1]		Docks	
2915	Engine Fuel System Components, Aircraft		TC	Aer	USAF
2920	Engine Electrical System Components, Nonaircraft	Ord [1]		Docks	

[1] Ordnance Corps will subassign to Corps of Engineers area covered by current DOD Standardization Program for Industrial Engines and Accessories.

FSC Class	Army	Other depts	

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Partici-pating activity	Navy	Air Force
2925	Engine Electrical System Components, Aircraft		TC	Aer	USAF
2930	Engine Cooling System Components, Nonaircraft	Ord		Docks	
2935	Engine Cooling System Components, Aircraft		TC	Aer	USAF
2940	Engine Air and Oil Filters, Strainers, and Cleaners, Nonaircraft	CE [3]		Ships	
2945	Engine and Oil Filters, Strainers, and Cleaners, Aircraft		TC	Aer	USAF
2950	Turbosuperchargers			Aer	USAF
2990	Miscellaneous Engine Accessories, Nonaircraft	Ord		Docks	
2995	Miscellaneous Engine Accessories, Aircraft		TC	Aer	USAF
3010	Torque Converters and Speed Changers	Ord		Ships	
3020	Gears, Pulleys, Sprockets, and Transmission Chain	CE		Ships	
3030	Belting, Drive Belts, Fan Belts and Accessories	Ord		Ships	
3040	Miscellaneous Power Transmission Equipment	Ord		Ships	
3110	Bearings, Antifriction, Unmounted		Ord	Ships	
3120	Bearings, Plain, Unmounted		Ord	Ships	
3130	Bearings, Mounted		Ord	Ships	
3210	Sawmill and Planing Mill Machinery	CE		Docks	
3220	Woodworking Machines		CE	Ships	
3230	Tools and Attachments for Woodworking Machinery		CE	Ships	
3411	Boring Machines		Ord	Ships	
3412	Broaching Machines		Ord	Ships	
3413	Drilling Machines		Ord	Ships	
3414	Gear Cutting and Finishing Machines		Ord	NOrd	
3415	Grinding Machines		Ord	NOrd	

3416	Lathes		Ord	Ships	
3417	Milling Machines		Ord	Ships	
3418	Planers		Ord	Ships	
3419	Miscellaneous Machine Tools		Ord	NOrd	
3422	Rolling Mills and Drawing Machines		Ord	Ships	
3424	Metal Heat Treating Equipment	Ord		Ships	
3426	Metal Finishing Equipment		Ord	Ships	
3428	Foundry Equipment and Supplies		Ord	Ships	
3432	Welding, Flame Cutting, and Metallizing Equipment and Supplies		Ord	Ships	
3441	Bending and Forming Machines		Ord	Ships	
3442	Hydraulic and Pneumatic Presses, Power Driven		Ord	NOrd	
3443	Mechanical Presses, Power-Driven		Ord	NOrd	
3444	Manual Presses		Ord	Ships	
3445	Punching and Shearing Machines		Ord	Ships	
3446	Forging Machinery and Hammers		Ord	NOrd	
3447	Wire and Metal Ribbon Forming Machines		Ord	Ships	USAF
3448	Riveting Machines		Ord	Ships	USAF
3449	Miscellaneous Secondary Metal Forming and Cutting Machines		Ord	Ships	
3450	Machine Tools, Portable		Ord	Ships	
3455	Cutting Tools for Machine Tools		Ord	Ships	
3456	Cutting and Forming Tools for Secondary Metalworking Machinery		Ord	Ships	
3460	Machine Tool Accessories		Ord	Ships	
3465	Production Jigs, Fixtures, and Templates		Ord	Ships	
3470	Machine Shop Sets, Kits, and Outfits		Ord	Ships	
3510	Laundry and Dry Cleaning Equipment	QMC		Docks	
3520	Shoe Repairing Equipment	QMC		Ships	
3530	Sewing Machines, Industrial	QMC		Ships	
3540	Wrapping and Packaging Machinery	QMC		S&A	
3550	Vending and Coin-Operated Machines	QMC		S&A	
3590	Miscellaneous Service and Trade Equipment	QMC		S&A	

[3] Corps of Engineers will subassign to Ordnance Corps area applicable to general purpose combat vehicles.

[3] Corps of Engineers will subassign to Ordnance Corps area applicable to general purpose combat vehicles.

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
3605	Food Products Machinery and Equipment	QMC		S&A	
3610	Printing, Duplicating, and Bookbinding Equipment	QMC			
3615	Pulp and Paper Industries Machinery	QMC		Docks	
3620	Rubber Working Machinery	Ord			
3625	Textile Industries Machinery	QMC		MC	
3630	Clay and Concrete Products Industries Machinery	CE		Docks	
3635	Glass Industries Machinery	Ord		S&A	
3640	Tobacco Manufacturing Machinery	QMC		S&A	
3645	Leather Tanning and Leather Working Industries Machinery	QMC		S&A	
3650	Chemical and Pharmaceutical Products Manufacturing Machinery	Med		S&A	
3655	Gas Generating Equipment (Subass airborne generating Equipment to USAF).	CE		Docks	
3695	Miscellaneous Special Industry Machinery	QMC		NOrd	
3710	Soil Preparation Equipment	CE		Docks	
3720	Harvesting Equipment	CE		Docks	
3730	Dairy, Poultry, and Livestock Equipment	QMC		Docks	
3740	Pest, Disease, and Frost Control Equipment	CE		Docks	
3750	Gardening Implements and Tools	CE		Docks	
3760	Animal Drawn Vehicles and Farm Trailers	CE		Docks	
3770	Saddlery, Harness, Whips, and Related Anima Furnishings	QMC		Docks	
3805	Earth Moving and Excavating Equipment (Subass graders, maintainers, track-laying ditchers to Navy).	CE		Docks	
3810	Cranes and Crane-Shovels (Subass track-laying crane-shovels to Navy)	CE		Docks	

3815	Crane and Crane-Shovel Attachments (Subass track-laying crane-shovel attachments to Navy).	CE	----	Docks	
3820	Mining, Rock Drilling, Earth Boring, and Related Equipment (Subass crushing, pulverizing and screening machinery to Navy).	CE	----	Docks	
3825	Road Clearing and Cleaning Equipment (Subass road and pavement clearing equipment (airfield) to USAF).	----	CE	Docks	
3830	Truck and Tractor Attachments	CE	----	Docks	
3835	Petroleum Production and Distribution Equipment	----	CE	Docks	
3895	Miscellaneous Construction Equipment (Subass mixing machinery, concrete mixing, paving, placing and related equipment to Navy).	CE	----	Docks	
3910	Conveyors (Subass airborne types to AF)	----	QMC	S&A	
3920	Materials Handling Equipment, Non-self-Propelled	----	QMC	S&A	
3930	Warehouse Trucks and Tractors, Self-Propelled	----	QMC	S&A	
3940	Blocks, Tackle, Rigging and Slings	TC	----	Ships	
3950	Winches, Hoists, Cranes, and Derricks	----	CE	Ships	
3960	Elevators and Escalators	----	CE	Docks	
3990	Miscellaneous Materials Handling Equipment	----	QMC	S&A	
4010	Chain and Wire Rope	----	TC	Ships	
4020	Fiber Rope, Cordage, and Twine	----	QMC	Ships	
4030	Fittings for Rope, Cable and Chain	----	TC	Ships	
4110	Self-Contained Refrigeration Units and Accessories	QMC	----	Docks	
4120	Self-Contained Air Conditioning Units and Accessories	----	CE	Ships	USAF
4130	Refrigeration and Air Conditioning Plants and Components	----	CE	Ships	
4140	Fans and Air Circulators, Non-Industrial	CE	----	Docks	
4210	Fire Fighting Equipment (Subass air crash equipment to USAF)	CE	----	Docks	
4220	Marine Lifesaving and Diving Equipment	----	TC	Ships	
4230	Decontaminating and Impregnating Equipment	CmlC	----	Docks	
4240	Safety and Rescue Equipment	CE	----	Ships	

FSC Class		Army	Other depts	

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
4310	Compressors and Vacuum Pumps	CE		Ships	
4320	Power and Hand Pumps	CE		Ships	
4330	Centrifugals, Separators, and Pressure and Vacuum Filters		CE	Ships	USAF
4410	Industrial Boilers		CE	Ships	
4420	Heat Exchangers and Steam Condensers		CE	Ships	
4430	Industrial Furnaces, Kilns, Lehrs, and Ovens		CE	Ships	
4440	Driers, Dehydrators, and Anhydrators		CE	Docks	
4450	Industrial Fan and Blower Equipment		CE	Ships	
4460	Air Purification Equipment		CE	Ships	
4510	Plumbing Fixtures and Accessories		CE	Docks	
4520	Space Heating Equipment and Domestic Water Htrs	CE		Docks	
4530	Fuel Burning Equipment Units	CE		Docks	
4540	Miscellaneous Plumbing, Heating, and Sanitation Equipment	CE		Docks	
4610	Water Purification Equipment	CE		Docks	
4620	Water Distillation Equipment, Marine and Industrial		CE	Ships	
4630	Sewage Treatment Equipment	CE		Docks	
4710	Pipe and Tube, Metal		CE	Ships	USAF
4720	Hose and Tubing, Flexible		Ord	Ships	
4730	Fittings and Specialties, Hose, Pipe, and Tube		CE	Ships	USAF
4810	Valves, Powered		CE	Ships	
4820	Valves, Nonpowered		CE	Ships	
4910	Motor Vehicle, Maintenance and Repair Shop Specialized Equipment	Ord		Docks	

4920	Aircraft Maintenance and Repair Shop Specialized Equipment		TC	Aer	USAF
4925	Ammunition Maintenance and Repair Shop Specialized Equipment		Ord	NOrd	
4930	Lubrication and Fuel Dispensing Equipment	Ord		Docks	
4940	Miscellaneous Maintenance and Repair Shop Specialized Equipment	Ord		Docks	
5110	Hand Tools, Edged, Nonpowered		Ord	Ships	
5120	Hand Tools, Nonedged, Nonpowered		Ord	Ships	
5130	Hand Tools, Power Driven		Ord	Ships	
5133	Drill Bits, Counter Bores, and Countersinks; Hand and Machine		Ord	Ships	
5136	Taps, Dies, and Collets; Hand and Machine		Ord	Ships	
5140	Tool and Hardware Boxes		Ord	Ships	
5180	Sets, Kits, and Outfits of Hand Tools		Ord	Ships	
5210	Measuring Tools, Craftsman's		Ord	Ships	
5220	Inspection Gages	Ord		NOrd	
5280	Sets, Kits, and Outfits of Measuring Tools		Ord	Ships	
5305	Screws		Ord	Ships	USAF
5306	Bolts		Ord	Ships	USAF
5307	Studs		Ord	Ships	USAF
5310	Nuts and Washers		Ord	Ships	USAF
5315	Nails, Keys and Pins		CE	S&A	USAF
5320	Rivets		Ord	Aer	USAF
5325	Fastening Devices		Ord	Aer	USAF
5330	Packing and Gasket Materials		Ord	Ships	
5335	Metal Screening	CE		Docks	
5340	Miscellaneous Hardware		CE	Docks	USAF
5345	Disks and Stones, Abrasive		CE	Ships	
5350	Abrasive Materials		CE	Ships	
5355	Knobs and Pointers		Ord	Ships	USAF
5410	Prefabricated and Portable Buildings		CE	Docks	
5420	Bridges; Fixed and Floating	CE		MC	

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
5430	Storage Tanks		CE	Docks	
5440	Scaffolding Equipment and Concrete Forms	CE		Docks	
5450	Miscellaneous Prefabricated Structures	CE		Docks	
5510	Lumber	CE		Ships	
5520	Millwork	CE		Docks	
5530	Plywood and Veneer	CE		Ships	
5610	Mineral Construction Materials, Bulk	CE		Docks	
5620	Building Glass, Tile, Brick, and Block	CE		Docks	
5630	Pipe and Conduit, Nonmetallic	CE		Docks	
5640	Wallboard, Building Paper, and Thermal Insulation Materials	CE		Docks	
5650	Roofing and Siding Materials	CE		Docks	
5660	Fencing, Fences, and Gates	CE		Docks	
5670	Architectural and Related Metal Products	CE		Docks	
5680	Miscellaneous Construction Materials	CE		Docks	
5805	Telephone and Telegraph Equipment	SigC		Ships	
5810	Cryptographic Equipment	(NSA)	SigC	Ships	
5815	Teletype and Facsimile Equipment	SigC		Ships	
5820	Radio and Television Communication Equipment	SigC		Ships	
5825	Radio Navigation Equipment		SigC	Ships	
5830	Intercommunication and Public Address Systems		SigC	Ships	
5835	Sound Recording and Reproducing Equipment		SigC	Ships	
5840	Radar Equipment		SigC	Ships	USAF
5845	Underwater Sound Equipment		SigC	Ships	

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5850	Visible and Invisible Light Communication Equipment		CE	Ships	
5895	Miscellaneous Communication Equipment		SigC	Ships	
5905	Resistors	SigC		Ships	
5910	Capacitors		SigC	Ships	USAF
5915	Filters and Networks		SigC	Ships	USAF
5920	Fuses and Lightning Arresters		CE	Ships	
5925	Circuit Breakers		CE	Ships	
5930	Switches		CE	Ships	USAF
5935	Connectors, Electrical		SigC	Ships	USAF
5940	Lugs, Terminals, and Terminal Strips	SigC		Ships	
5945	Relays, Contactors, and Solenoids		SigC	Ships	
5950	Coils and Transformers	SigC		Ships	
5955	Piezoelectric Crystals	SigC		Ships	
5960	Electron Tubes, Transistors and Rectifying Crystals		SigC	Ships	
5965	Headsets, Microphones, and Speakers	SigC		Ships	
5970	Electrical Insulators and Insulating Materials		SigC	Ships	
5975	Electrical Hardware and Supplies	CE		Docks	
5977	Electrical Contact Brushes and Electrodes		CE	Ships	
5985	Antennae, Waveguides, and Related Equipment		SigC	Ships	
5990	Synchros and Resolvers		Ord	NOrd	
5995	Cable, Cord, and Wire Assemblies, Communication Equipment	SigC		Ships	
5999	Miscellaneous Electrical and Electronic Components		SigC	Ships	USAF
6105	Motors, Electrical		CE	Ships	
6110	Electrical Control Equipment (Subass portable generator control equipment to Army).		CE	Ships	
6115	Generators and Generator Sets, Electrical (Subass portable generators and sets to Army).		CE	Ships	
6120	Transformers, Distribution and Power Station	CE		Ships	
6125	Converters, Electrical		CE	Ships	USAF
6130	Rectifying Equipment, Electrical		CE	Ships	

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
6135	Batteries, Primary	SigC		Ships	
6140	Batteries, Secondary (Subass vehicular automotive batteries to Army)		SigC	Ships	
6145	Wire and Cable, Electrical	SigC		Ships	
6150	Miscellaneous Electric Power and Distribution Equipment	CE		Ships	
6210	Indoor and Outdoor Electric Lighting Fixtures (Subass Air Base lighting to USAF).		CE	Ships	
6220	Electric Vehicular Lights and Fixtures	Ord		Docks	
6230	Electric Portable and Hand Lighting Equipment	CE		Ships	
6240	Electric Lamps		CE	Ships	
6250	Ballasts, Lampholders, and Starters		CE	Ships	
6260	Nonelectrical Lighting Fixtures	QMC		Docks	
6310	Traffic and Transit Signal Systems	CE		Docks	
6320	Shipboard Alarm and Signal Systems		TC	Docks	
6330	Railroad Signal and Warning Devices	CE		Docks	
6340	Aircraft Alarm and Signal Systems		TC	Aer	USAF
6350	Miscellaneous Alarm and Signal Systems	CE		Ships	
6505	Drugs, Biologicals, and Official Reagents	(ASMPA)	Med	BuMed	
6510	Surgical Dressing Materials	(ASMPA)	Med	BuMed	
6515	Medical and Surgical Instruments Equipment and Supplies	(ASMPA)	Med	BuMed	
6520	Dental Instruments, Equipment and Supplies	(ASMPA)	Med	BuMed	
6525	X-ray Equipment and Supplies, Medical, Dental and Veterinary	(ASMPA)	Med	BuMed	
6530	Hospital Furniture, Equipment, Utensils, and Supplies	(ASMPA)	Med	BuMed	
6535	Veterinary Instruments, Equipment and Supplies	(ASMPA)	Med	BuMed	

6540	Opticians' Instruments, Equipment and Supplies	(ASMPA)	Med	BuMed	
6545	Medical Sets, Kits, and Outfits	(ASMPA)	Med	BuMed	
6605	Navigational Instruments		TC	Ships	
6610	Flight Instruments		TC	Aer	USAF
6615	Automatic Pilot Mechanisms and Airborne Gyro Components		TC	Aer	USAF
6620	Engine Instruments		CE	Aer	USAF
6625	Electrical and Electronic Properties Measuring and Testing Instruments.	SigC		Ships	
6630	Chemical Analysis Instruments	CmlC		NOrd	
6635	Physical Properties Testing Equipment	Ord		NOrd	
6640	Laboratory Equipment and Supplies	CmlC		NOrd	
6645	Time Measuring Instruments		Ord	Ships	USAF
6650	Optical Instruments (Subass shipboard instruments to Navy)	Ord		Ships	
6655	Geophysical and Astronomical Instruments		CE	Ships	USAF
6660	Meteorological Instruments		SigC	Aer	USAF
6665	Hazard-detecting Instruments and Apparatus		SigC	Ships	
6670	Scales and Balances	QMC		Ships	
6675	Drafting, Surveying and Mapping Instruments	CE		Docks	
6680	Liquid and Gas Flow, Liquid Level, and Mechanical Motion Measuring Instruments.		CE	Aer	
6685	Pressure, Temperature, and Humidity Measuring and Controlling Instruments.		SigC	Aer	USAF
6695	Combination and Miscellaneous Instruments		CE	Aer	USAF
6710	Cameras, Motion Picture (Subass airborne to Navy)	SigC		Aer	
6720	Cameras, Still Picture		SigC	Aer	USAF
6730	Photographic Projection Equipment		SigC	Ships	
6740	Photographic Developing and Finishing Equipment	SigC		Aer	
6750	Photographic Supplies		SigC	Aer	
6760	Photographic Equipment and Accessories		SigC	Aer	USAF
6770	Film, Processed		SigC	Aer	USAF

FSC Class		Army	Other depts	

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
6780	Photographic Sets, Kits, and Outfits		SigC	Aer	USAF
6810	Chemicals	CmlC		Ships	
6820	Dyes	CmlC		Ships	
6830	Gases: Compressed and Liquefied	CE		Ships	
6840	Pest Control Agents and Disinfectants		QMC	Ships	
6850	Miscellaneous Chemical Specialties	CmlC		Ships	
6910	Training Aids		SigC	Aer	USAF
6920	Armament Training Devices		Ord	Aer	USAF
6930	Operational Training Devices		CE	Aer	USAF
6940	Communications Training Devices		SigC	Ships	USAF
7105	Household Furniture	QMC		Docks	
7110	Office Furniture	QMC		S&A	
7125	Cabinets, Lockers, Bins and Shelving	QMC		Docks	
7195	Miscellaneous Furniture and Fixtures	QMC		Docks	
7210	Household Furnishings	QMC		S&A	
7220	Floor Coverings		QMC	Docks	
7230	Draperies, Awnings, and Shades		QMC	S&A	
7240	Household and Commercial Utility Containers	QMC		Ships	
7290	Miscellaneous Household and Commercial Furnishings and Appliances	QMC		S&A	
7310	Food Cooking, Baking, and Warming Equipment	QMC		Ships	
7320	Kitchen Equipment and Appliances	QMC		Ships	
7330	Kitchen Hand Tools and Utensils	QMC		Ships	

7340	Cutlery and Flatware	QMC		Ships	
7350	Tableware	QMC		Ships	
7360	Sets, Kits, and Outfits, Food Preparation and Serving	QMC		Ships	
7410	Punched Card System Machines		QMC	S&A	USAF
7420	Billing and Computing Machines	QMC		S&A	
7430	Typewriters and Office-Type Composing Machines	QMC		S&A	
7490	Miscellaneous Office Machines	QMC		S&A	
7510	Office Supplies		QMC	S&A	
7520	Office Devices and Accessories		QMC	S&A	
7530	Stationery and Record Forms		QMC	S&A	
7610	Books and Pamphlets		QMC	Ships	USAF
7630	Newspapers and Periodicals		QMC	Ships	USAF
7640	Maps, Atlases, Charts, and Globes		CE	Ships	USAF
7650	Drawings and Specifications	(*)	(*)	(*)	(*)
7660	Sheet and Book Music		QMC	S&A	USAF
7670	Microfilm, Processed		SigC	Aer	USAF
7690	Miscellaneous Printed Matter		QMC	S&A	
7710	Musical Instruments	QMC		Ships	
7720	Musical Instrument Parts and Accessories	QMC		Ships	
7730	Phonographs, Radios, and Television Sets, Home-type	SigC		Ships	
7740	Phonograph Records	SigC		Ships	
7810	Athletic and Sporting Equipment	QMC		S&A	
7820	Games, Toys, and Wheeled Goods	QMC		S&A	
7830	Recreational and Gymnastic Equipment	QMC		S&A	
7910	Floor Polishers and Vacuum Cleaners	CE		S&A	
7920	Brooms, Brushes, Mops, and Sponges		QMC	Ships	
7930	Cleaning and Polishing Compounds and Preparations	QMC		Ships	

*Not assigned.

FSC Class		Army		Other depts	

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
8010	Paints, Dopes, Varnishes, and Related Products		CE	Ships	
8020	Paint and Artists' Brushes		CE	Ships	
8030	Preservative and Sealing Compounds	Ord		Ships	
8040	Adhesives		Ord	Aer	
8105	Bags and Sacks	QMC		S&A	
8110	Drums and Cans	QMC		S&A	
8115	Boxes, Cartons and Crates		QMC	S&A	
8120	Gas Cylinders (Subass shatter-proof gas cylinders to Navy)	CE		Ships	
8125	Bottles and Jars	(ASMPA)	Med	BuMed	
8130	Reels and Spools		SigC	Ships	
8135	Packaging and Packing Bulk Materials		QMC	S&A	USAF
8140	Ammunition Boxes, Packages and Special Containers		Ord	NOrd	
8305	Textile Fabrics	QMC		S&A & MC	
8310	Yarn and Thread	QMC		S&A & MC	
8315	Notions and Apparel Findings	QMC		S&A & MC	
8320	Padding and Stuffing Materials	QMC		S&A & MC	
8325	Fur Materials	QMC		S&A & MC	
8330	Leather	QMC		S&A & MC	
8335	Shoe Findings and Soling Materials	QMC		S&A & MC	
8340	Tents and Tarpaulins	QMC		S&A & MC	
8345	Flags and Pennants	QMC		S&A & MC	
8405	Outerwear, Men's	QMC		S&A & MC	
8410	Outerwear, Women's	QMC		S&A & MC	

8415	Clothing, Special Purpose	QMC		S&A & MC	
8420	Underwear and Nightwear, Men's	QMC		S&A & MC	
8425	Underwear and Nightwear, Women's	QMC		S&A & MC	
8430	Footwear, Men's	QMC		S&A & MC	
8435	Footwear, Women's	QMC		S&A & MC	
8440	Hosiery, Handwear, and Clothing Accessories, Men's	QMC		S&A & MC	
8445	Hosiery, Handwear, and Clothing Accessories, Women's	QMC		S&A & MC	
8450	Children's and Infants' Apparel and Accessories	QMC		S&A & MC	
8455	Badges and Insignia	QMC		S&A & MC	
8460	Luggage	QMC		S&A & MC	
8465	Individual Equipment	QMC		S&A & MC	
8510	Perfumes, Toilet Preparations and Powders	QMC		S&A	
8520	Toilet Soap, Shaving Preparation and Dentifrices	QMC		S&A	
8530	Personal Toiletry Articles	QMC		S&A	
8540	Toiletry Paper Products	QMC		S&A	
8710	Forage and Feed	QMC		Docks	
8720	Fertilizers	QMC		Docks	
8730	Seeds and Nursery Stocks	QMC		Docks	
8810	Live Animals, Raised for Food	(*)	(*)	(*)	(*)
8820	Live Animals, not Raised for Food	(*)	(*)	(*)	(*)
8905	Meat, Poultry, and Fish	QMC		S&A & MC	
8910	Dairy Foods and Eggs	QMC		S&A & MC	
8915	Fruits and Vegetables	QMC		S&A & MC	
8920	Bakery and Cereal Products	QMC		S&A & MC	
8925	Sugar, Confectionery, and Nuts	QMC		S&A & MC	
8930	Jams, Jellies, and Preserves	QMC		S&A & MC	
8935	Soups and Bouillons	QMC		S&A & MC	
8940	Special Dietary Foods and Food Specialty Preparations	QMC		S&A & MC	

*Not assigned.

FSC Class		Army		Other depts	

FSC Class		Army		Other depts	
Symbol	Title	Assignee activity	Participating activity	Navy	Air Force
8945	Foods Oils and Fats	QMC		S&A & MC	
8950	Condiments and Related Products	QMC		S&A & MC	
8955	Coffee, Tea, and Cocoa	QMC		S&A & MC	
8960	Beverages, Nonalcoholic	QMC		S&A & MC	
8965	Beverages, Alcoholic	QMC		S&A & MC	
8970	Composite Food Packages	QMC		S&A & MC	
8975	Tobacco Products	QMC		S&A & MC	
9110	Fuels, Solid (Subass to Navy coal used in commercial-industrial facilities or used in central heating plants in furnaces rated at 600,000 BTU/Hour and larger).	CE		S&A	
9120	Fuel Gases	CE		Docks	
9130	Gasoline and Jet Fuel		Ord	Aer	USAF
9140	Fuel Oils		CE	Ships	
9150	Oils and Greases: Cutting, Lubricating, and Hydraulic	Ord		Ships	
9160	Miscellaneous Waxes, Oils, and Fats	QMC		Ships	
9310	Paper and Paperboard	QMC		Aer	
9320	Rubber Fabricated Materials	Ord		Ships	
9330	Plastic Fabricated Materials		SigC	Ships	
9340	Glass Fabricated Materials	Ord		Ships	
9350	Refractories and Fire Surfacing Materials		CE	Ships	
9390	Miscellaneous Fabricated Nonmetallic Materials		CE	Ships	
9410	Crude Grades of Plant Materials		QMC	Ships	
9420	Fibers, Vegetable, Animal, and Synthetic		QMC	Ships	

9430	Miscellaneous Crude Animal Products, Inedible	QMC		Ships	
9440	Miscellaneous Crude Agricultural and Forestry Products	QMC		Ships	
9450	Nonmetallic Scrap	QMC		Ships	
9505	Wire, Nonelectrical, Iron and Steel		CE	NOrd	
9510	Bars and Rods, Iron and Steel	Ord		Ships	
9515	Plate, Sheet, and Strip, Iron and Steel		Ord	Ships	
9520	Structural Shapes, Iron and Steel	CE		Ships	
9525	Wire, Nonelectrical, Nonferrous Base Metal		CE	Aer	USAF
9530	Bars and Rods, Nonferrous Base Metal		Ord	Aer	USAF
9535	Plate, Sheet, Strip, and Foil, Nonferrous Base Metal		Ord	Aer	USAF
9540	Structural Shapes, Nonferrous Base Metal		CE	Aer	USAF
9545	Plate, Sheet, Strip, Foil, and Wire, Precious Metal		QMC	Aer	USAF
9610	Ores	(*)	(*)	(*)	(*)
9620	Minerals, Natural and Synthetic		CE	Ships	USAF
9630	Additive Metal Materials and Master Alloys		Ord	Aer	USAF
9640	Iron and Steel Primary and Semi-finished Products	Ord		NOrd	
9650	Nonferrous Base Metal Refinery and Intermediate Forms		Ord	Ships	USAF
9660	Precious Metals Primary Forms		QMC	Ships	USAF
9670	Iron and Steel Scrap	Ord		Ships	
9680	Nonferrous Metal Scrap		Ord	Ships	USAF
9905	Signs, Advertising Displays, and Identification Plates	CE		Docks	
9910	Jewelry		QMC	Ships	
9915	Collectors' Items	(*)	(*)	(*)	(*)
9920	Smokers' Articles and Matches	QMC		S&A	
9925	Ecclesiastical Equipment Furnishings and Supplies		QMC	Ships	
9930	Memorials, Cemeterial and Mortuary Equipment and Supplies	QMC		BuMed	
9999	Miscellaneous Items	(*)	(*)	(*)	(*)

*Not assigned.

6. Organization. *a.* The head of each technical service will provide for the accomplishment within his organization of the following functions, and such other standardization functions as may be assigned:

(1) Overall management, by a designated unit in the office of the head of each technical service, of standardization responsibility under FSC classes as assigned by the Deputy Chief of Staff for Logistics, and other standardization responsibilities as required by those regulations. Discharge of these responsibilities requires competent engineering management with authority for obtaining required action in the various administrative divisions affected by standardization.

(2) Managerial and technical participation by service personnel as required in all phases of standardization activity.

(3) Preparation, coordination, submittal (and publication and distribution, as required) of plans, reports, and implementing standardization documents for which the service is responsible.

b. The head of each technical service will designate by letter to the Deputy Chief of Staff for Logistics, giving name, title, and organizational address, the chief of the standardization management unit (*a*(1) above).

7. Coordination with agencies outside Department of the Army. Official departmental contact with all agencies outside of the Department of the Army on matters pertaining to standardization is established by the Deputy Chief of Staff for Logistics. After establishment of contacts, direct action by the technical services is authorized with copy of actions to the Deputy Chief of Staff for Logistics.

a. General Services Administration. The Office of the Assistant Secretary of Defense (S&L) will be the point of contact for coordination of cataloging, inspection, and standardization matters with the General Services Administration.

b. Office of the Assistant Secretary of Defense (S&L).

(1) *Cataloging Division.* The Department of the Army is represented on the Advisory Group of this office by a member and an alternate.

(2) *Inspection Division.* The Department of the Army is represented in meetings called by this office, for facilitating improvement of inspection and quality control operations.

(3) *Standardization Division.* The Department of the Army is represented on the Advisory Group of this office by a member and an alternate.

c. Joint agencies. The Department of the Army is represented on all joint agencies in which it has an interest.

d. Interdepartmental Screw-Thread Committee. The Department of the Army provides membership on this committee for cooperation with the Departments of the Navy, the Air Force, and Commerce in the establishment of screw-thread standards for the Federal services.

e. Department of Commerce. The Deputy Chief of Staff for Logistics furnishes Department of the Army contact with the Department of Commerce, Commodity Standards Division, in the establishment of Commercial Standards and Simplified Practice Recommendations.

f. Other Federal agencies. The Department of the Army cooperates with other Federal agencies in matters of standardization.

g. Liaison with technical societies. The Deputy Chief of Staff for Logistics establishes and maintains Army liaison representation on committees of technical societies and associations on matters pertaining to standardization. The Deputy Chief of Staff for Logistics issues instructions applying to such Army representation, and maintains and issues a register of all representatives.

SECTION II

TYPES OF SPECIFICATIONS AND STANDARDS

8. Specifications. The following types of specifications are authorized for use in Department of the Army procurement as prescribed by part 3, section I, Armed Services Procurement Regulation and Army Procurement Procedure:

a. Federal specifications. Federal specifications cover those materials, products, or services used by at least two Federal agencies (at least one of which is civilian) or new items of general application. A Federal specification, when published, supersedes all antecedent specifications for the same material, product, or service, and its use is mandatory, where applicable. An interim Federal specification is prepared and issued by a single activity, intended for final processing as either a new or revised Federal specification, which may be used at the option of using agencies before it has been completely coordinated and promulgated as a Federal specification.

b. Military specifications. Military specifications (MIL) are developed to cover materials, products, or services of primary interest to military activities. A Military specification, when published, supersedes antecedent specifications for the same material, product, or service, and its use is mandatory, where applicable. Limited coordination Military specifications are issued by the Department of the Army to cover items of Army interest only or to satisfy an immediate procurement need.

9. Standards. The following types of standards are authorized for use by the Department of the Army:

a. Federal standards. Federal standards are published by the General Services Administration. Federal standards, when published, supersede all antecedent Military, or service standards, for the same item. They are mandatory for use, where applicable, by all civil and military Federal activities.

b. Other Government-issued standards. These standards include—

(1) *Screw-Thread Standards for Federal Services.* These standards are published by the Department of Commerce; use of these standards is mandatory on the Department of the Army.

(2) *Commercial Standards and Simplified Practice Recommendations.* These standards are published by the Department of Commerce; use of these standards is encouraged, especially for reference in specifications where practicable.

c. Military standards. Military standards are issued in two basic formats (MIL–STD and MS) which are divided administratively into coordinated and limited coordination standards:

(1) *MIL–STD.* Standards in this format are issued bound (book form), or as single sheets (unit page form) where content can be so accommodated. These standards include engineering practices, charts, categories of dimensional and functional details, graphs, formulas, and lists.

(2) *MS—sheet form.* Standards in this format are issued as single sheets or as serially numbered sets, and cover physical items primarily. These standards will be limited to those dimensional and functional details required to insure interchangeability of items.

(3) *Coordinated standards.* Coordinated standards cover items coordinated with more than one department, are issued in MIL–STD or MS format, as appropriate, and are published by the preparing activity upon approval by the Office of Standardization. They supersede all antecedent Military or Service standards and their use is mandatory, where applicable.

(4) *Limited coordination standards.* Limited coordination standards cover items of single departmental interest or for which there is an immediate need prior to interdepartmental coordination. They are issued, in MS format only, by a single activity under departmental procedure. Limited coordination standards will not be issued to cover engineering practices or items in existing coordinated standards.

d. Service practices. The services publish standard drafting practices, preferred engineering item lists or drawings, and instructions which are peculiar to the services and which are in consonance with existing Federal or Military standards.

e. Deviations and waivers. Prior to authorizing any deviations or waivers to coordinated Military standards the head of a technical service will subject such deviations or waivers to competent review. For provisions covering deviations and waivers to specifications see APP 1–305. All resulting deviations and waivers to coordinated Military standards will be reported to the Deputy Chief of Staff for Logistics (Attn: Chief, Standards Branch) at the time such deviations or waivers are made. When repeated deviations or waivers are found necessary action to revise the standard will be taken in accordance with established procedure.

Section III

DEVELOPMENT AND PREPARATION PROCEDURES

10. General. Nationally recognized industry, technical society, and commercial specifications and standards, when practical and economical, will be adopted and integrated in the military specifications and standard systems to the maximum practical degree. Unduly exacting requirements cause higher costs for products and unnecessary waste of time and materials which are especially scarce in time of war. Technical requirements should be detailed only to the degree necessary to insure the procurement of materials, products, or services adequate for the functions they are to perform. The use of strategic and critical materials will be considered in the light of wartime availability. Wherever feasible, provision will be made for the use of alternate materials.

11. Other Government-issued standards. *a.* Government-issued standards, other than those in the Federal or Military series, are promulgated by the Department of Commerce.

b. The Department of the Army is represented on the Interdepartmental Screw-Thread Committee by the Ordnance Corps and the Corps of Engineers. The Army representatives on this committee are responsible for coordination of screw-thread standards within the Department of the Army.

c. Commercial Standards and Simplified Practice Recommendations are promulgated in accordance with policies and procedures established by the Commodity Standards Division of the Department of Commerce. Within the Department of the Army, drafts of proposed Commercial Standards and Simplified Practice Recommendations are referred through the Deputy Chief of Staff for Logistics to

the service having primary interest. This service coordinates the draft within the Department of the Army and forwards reconciled comments to the Deputy Chief of Staff for Logistics.

12. Federal and coordinated Military specifications and standards. *a.* Federal specifications and standards are promulgated by the General Services Administration. Coordinated Military specifications and standards are promulgated by the Department of Defense.

b. The following procedure will apply to Federal and Coordinated Military specifications and standards within the Department of the Army:

(1) The processing of Federal and Coordinated Military specification and standard projects is conducted in accordance with procedures and policies established by the Department of Defense and published in the Military Manual for Specifications, M 202 and the Military Manual for Standards and Standardization Studies, M 203.

(2) When the Army custodian is the military coordinating activity or the preparing activity and is unable to reconcile essential comments of the technical services, the Army custodian will submit the unreconciled essential comment to the Deputy Chief of Staff for Logistics for resolution. Also, that activity will advise the Deputy Chief of Staff for Logistics of important unreconciled comment between the Army and any other department at the time of submittal of the final draft or comment to the Department of Defense.

(3) When the Army custodian is not the military coordinating activity or the preparing activity and is unable to reconcile essential comments of the technical services, the Army custodian will submit the unreconciled essential comment to the Deputy Chief of Staff for Logistics for resolution prior to submittal to the military coordinating activity or the preparing activity.

(4) Requests for the issuance of an Interim Federal Specification by a technical service will be submitted to the Deputy Chief of Staff for Logistics.

(5) When the preparing activity for sheet form coordinated standards is within the Army, MS numbers will be assigned by the Deputy Chief of Staff for Logistics, from the Army block of numbers. Requests for assignment of numbers, accompanied by two copies of drafts, will be made to the Deputy Chief of Staff for Logistics immediately prior to preparation of final drafts or at such earlier time as the total number of standards and the corresponding titles for an

individual project are known. In either case, the preparing activity will furnish to the Deputy Chief of Staff for Logistics two copies of drafts at the time of submittal to the Department of Defense for approval.

13. Limited Coordination Military specifications and standards. The following procedure will apply to limited coordination Military specifications and standards within the Department of the Army:

a. Necessary coordination of the specification or standard within the Department of the Army and with industry will be accomplished by the custodian. The custodian will make every effort to reconcile essential comments. Unreconciled essential comments will be forwarded to the Deputy Chief of Staff for Logistics with the draft of the proposed specification or standard.

b. Drafts of limited coordination specifications and standards will be submitted in duplicate to the Deputy Chief of Staff for Logistics for approval and assignment of a number from the block administered by the Department of the Army. The drafts will be accompanied by a statement as to the extent of coordination within the Department of the Army, whether all essential comments have been reconciled, where necessary, and the following information:

(1) Specification or standard number (for revisions only).
(2) Title.
(3) Whether the title is in consonance with the "Federal Item Identification Guides for Supply Cataloging."
(4) If specification or standard is a revision, give important changes and reasons therefor.
(5) Type classification of item and authority establishing type classification.
(6) Whether specification or standard is restrictive to the items, materials, or service of one manufacturer.
(7) Whether manufacture is commercial or exclusively for the Government.
(8) Whether the requirements of specification or standard are such as to prevent price competition.
(9) Approximate dollar volume of procurement expected for item.

(10) Specification or standard has been coordinated with manufacturers and trade associations listed as follows:

Manufacturer or trade association	*Address*
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----------	----------
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(11) Features that have been unfavorably commented upon by industry but are deemed necessary to produce an item meeting the Military characteristics or requirements of the service.

(12) If specification or standard fails to meet the required Military characteristics and in what respects.

(13) In establishing technical requirements in the specification or standard, whether minimum use has been made of critical and strategic materials.

(14) Critical and strategic materials required for item and, when possible, amounts required. (If the critical material is employed as an alloying element, positive identification of the composite material will be sufficient.)

(15) Specification complies with applicable standards. (If not, cite request for authorized deviation.)

c. Changes in limited coordination Military specifications or standards will be effected as follows:

(1) When proposed changes involve only minor rewording or correction of errors, they will be prepared and published by the custodian as amendments of specifications or revisions of standards, as applicable. Such amendments or revisions do not require approval by the Deputy Chief of Staff for Logistics but copies will be forwarded for record to the Deputy Chief of Staff for Logistics.

(2) Changes which affect significant factors such as military characteristics, performance, appearance, dimensioning, or interchangeability of the item will be prepared by the custodian as revisions, processed in the same manner as new specifications or standards, and approved as revisions.

d. Cancellation of limited coordination Military specifications and standards no longer required will be coordinated by the custodian in the same manner as new or revised specifications and standards, after which formal authority for cancellation will be obtained by the custodian from the Deputy Chief of Staff for Logistics.

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14. Keeping specifications up to date. New specifications will not be issued to duplicate existing coordinated Federal or Military specifications except as provided by SR 715–50–20. Existing specifications and standards will be amended or revised as often as necessary in order to be kept currently adequate. Each service will review periodically all specifications and standards used by it to determine whether such specifications and standards are adequate. Recommendations for modernization of these specifications and standards will be made through established channels.

15. Cancellations. When a specification or standard is no longer required or upon publication of a coordinated Federal or Military specification or standard, the custodian of a superseded specification or standard will take appropriate action to initiate cancellation of the superseded document.

16. Qualification requirement in specifications. *a.* Qualification of a product will be required only when necessary and justifiable under the conditions in ASPR 2–502. The administrative and test work associated with qualification make it imperative that sound judgment be used when requiring qualification of a product. The requirement for qualification will be eliminated when experience in procurement and use of the product indicates that qualification is no longer necessary.

b. Before the requirement for qualification of a product is included in a specification, test data will be obtained to insure that products can be manufactured which will meet the requirement. These products should be available in quantity. In no case will qualification be specified as a means to initiate development of an item. Improper requirements seriously delay the establishment of a list and make the qualification requirement a handicap rather than an aid to procurement activities.

c. The Army custodian of a specification containing a requiremen for qualification will provide for periodic review and evaluation of procurement experience to determine whether continued need exists for the requirement and maintenance of the associated qualified products list. Procedures covering preparation of qualified products lists are in SR 715–50–30.

Section IV

FORM

17. Federal specifications. The form for Federal specifications will be as prescribed in the Military Manual on Specification Format, M 205.

18. Other Government-issued standards. The form for other Government-issued standards (Screw-Threads Standards for Federal Services, Commercial Standards, and Simplified Practice Recommendations) is established by the Department of Commerce.

19. Military (MIL) specifications and standards. The form for military specifications and standards is established by the Department of Defense. Formats are included in SR 715–50–21 and SR 715–50–26 which establish outline of forms for specifications and standards respectively.

Section V

REPRODUCTION AND DISTRIBUTION

20. Reproduction. *a.* Reproduction of Military specifications and standards and amendments or revisions will be accomplished in accordance with the following procedures:

(1) *Supply of coordinated military specifications and standards.* The Army custodian will determine the overall Army requirements. When the preparing activity is one of the other two Military Departments, the Army custodian will include in the letter, submitting the Army comments to the preparing activity, the number of copies required and the addresses to which the copies are to be sent. The Army custodian, when the preparing activity, will include the number of copies required by the other two Military Departments in addition to the overall Army requirements, and the addresses to which the copies are to be sent, in submitting the specification or standard to The Adjutant General for reproduction through normal publication channels.

(2) *Resupply of coordinated military specifications and standards.* The Army custodian will be responsible for the supply of copies to other technical services. Requisitions for reproduction will be processed by the Army custodian to The Adjutant General through normal publication channels.

b. Approval of a Limited Coordination Military specification or standard by the Deputy Chief of Staff for Logistics constitutes authority for its publication by the custodian. The custodian will be responsible for the publication of sufficient copies for automatic distribution and to fill requisitions. By agreement with the custodian, any service may reproduce limited coordination Military specifications required to meet an emergency. These specifications will not be printed if other methods of reproduction will more economically provide the number of copies required.

21. Distribution. A liberal attitude is enjoined with respect to compliance with requests for copies of specifications and standards from manufacturers, contractors, and other users.

a. Federal specifications and standards. The Quartermaster General will be responsible for obtaining sufficient copies of Federal specifications and standards to meet the needs of the Department of the Army and for bulk distribution of copies of approved Federal specifications and standards to a central distribution point in each technical service, each army headquarters, and independent establishments.

(1) Technical services assigned as Military coordinating activity or as Army custodian for coordination of a Federal specification, standard, amendment or revision will obtain during coordination a statement as to the number of copies required by each interested technical service, the Navy and the Air Force as applicable. Notification concerning the number of copies required and the receiving addressees will be submitted at the time of submittal of comment to the Office of the Assistant Secretary of Defense (S & L) or the Military coordinating activity as applicable.

(2) Technical services other than the Quartermaster Corps assigned as Military coordinating activity or as Army custodian for coordination will furnish the Quartermaster Corps two copies of the notification submitted in accordance with (1) above.

(3) Requests for bulk resupply of Federal specifications and standards will be made to the Quartermaster Corps by each technical service.

(4) The Quartermaster General will arrange any details necessary to effect a timely supply of Federal specifications and standards to the technical services.

b. Military specifications and standards. Military (coordinated and limited coordination) specifications and standards will be distributed within the Army by the Army custodian. The automatic distribution of copies of Military specifications and standards and amendments or revisions by the custodian, will include—

(1) Sending as many copies to the head of each technical service as he requests. (The head of a technical service will request a sufficient number of copies to make such distribution as he desires to all activities under his supervision.)

(2) Furnishing copies to—

(*a*) Deputy Chief of Staff for Logistics, ATTN: Procurement Division.

(*b*) Commanding General, Continental Army Command (where of interest).

(3) Distribution in accordance with a mailing list approved by the head of the service concerned.

(4) Distribution of limited coordinated specifications and standards to the Standardization Division, Department of Defense, and to other departments in accordance with the Military Manual for Specifications, M 202 and SR 715–50–25.

(5) The Quartermaster General will supply copies of Military specifications covering packaging materials and containers to the General Services Administration regional offices.

(6) Standardization among the armies of the United States, the United Kingdom, and Canada provides for full cooperation among the ABC armies. In order to avoid delays which may occur through misinterpretation of United States military specifications and standards, the heads of technical services will assure that an adequate supply of these documents are made available through their accredited liaison officers.

(7) Each service will provide for availability of—

(*a*) A complete file of the specifications and standards for which the service has been assigned custodianship.

(*b*) An up-to-date reproducible master copy (and necessary reproductions thereof) of each drawing to which reference is made in specifications under the custody of the service.

(*c*) A complete reference file of obsolete specifications and standards under the custody of the service.

22. Index. The Index of Specifications and Standards (used by) Department of the Army, arranged alphabetically and numerically, will be published as volume II, Military Index. This index will be issued and distributed semiannually on 1 April and 1 October, with cumulative monthly supplements issued for intervening months as prescribed.

[AG 400.114 (18 Jul 55) LOG/E3]

BY ORDER OF THE SECRETARY OF THE ARMY:

MAXWELL D. TAYLOR,
General, United States Army,
Chief of Staff.

OFFICIAL:

JOHN A. KLEIN,
Major General, United States Army,
The Adjutant General.

DISTRIBUTION:

Active Army: D plus class II and III Instl (5).

To be distributed on a need-to-know basis to Department of the Army agencies, Continental Army Command, Army headquarters, and headquarters of major oversea commands and as indicated.

NG: State AG (3)

USAR: None.

EXHIBIT H

ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D. C., April 29, 1957.

DEAR MR. CHAIRMAN: Under date of April 2, 1957, Mr. Roger E. Gay of my staff informed you that a reply to your letter of March 18, 1957, relative to guided missiles would be furnished as soon as possible. Accordingly, the following information is submitted.

Assignment of standardization responsibiilty for the Federal supply classes for guided missiles, and the components, control systems, launchers, and handling equipments peculiar to guided missiles has not been made. Practically all of the items included in these FSC classes are still in the research and development stage. Under such circumstances, care must be taken to prevent premature standardization. Accordingly, an exception was made to the general policy of class assignment of standardization responsibility, and management in this field is being retained within my own staff until the state of the art has been stabilized. Pending this stabilization, we are stressing the areas of common engineering practices and common-use items as related to guided missiles. Projects have been undertaken to establish common design criteria and practices, and common requirements for construction methods, demonstrations, and tests. Such standardization provides the basis for insuring the maximum use of components common to many different kinds of equipments. Standardization of common components which includes bolts, nuts, washers, and many electronic components is being pursued under the Federal supply classes covering these items.

The danger of premature standardization where the technology or art is advancing rapidly was brought out by my staff at the hearings held by your subcommittee on the defense cataloging and standardization program on January 30–31, 1957. This point is still further emphasized in the following statement from Rear Adm. John E. Clark which is in reply to your question as to the basis for a statement in Aviation Week of February 25, 1957, pages 110–111, attributed to him:

"Perhaps the statement referring to 'insisting on outdated specifications' should have been amplified. It is true that in the past, as we were just beginning to feel our way along in the missile business, we may have used specifications that were not ideally suited to missiles; some that were carried over, for example, from the aircraft industry. Aircraft material may require different standards because of considerations of safety, longer life and the presence of a pilot who can react to emergencies. Missiles, on the other hand, require higher reliability but need shorter operating life, do not have to accommodate humans, etc. We used these aircraft (or ordnance) specifications primarily because we lacked experience and needed something as a foundation. I am certain that today we are becoming ever more responsive to current needs in missile specifications. I would like to mention a typical example wherein we found our original standards unsuited to missilery and, upon seeing the shortcomings, changed our concepts.

"The original ordnance specifications for the boosters that we use on the Regulus called for operation after cycling to temperatures as low as —60° F. This probably started with the specification for airborne rockets which might remain at extremely high altitudes, and hence low temperatures, for a long time. We soon realized that in any operations of the Regulus from a submarine or cruiser that, even though the ambient temperature might be low, that the missile would be fired shortly after emerging from a warm hangar and the powder grain would never get very cold. Therefore, we changed the low temperature limit to —20° F. and thus greatly simplified the manufacture of the booster * * *

"Such changes are characteristic of any growing program and in justification of our methods, I believe I can point with considerable pride to the Navy's missile accomplishments achieved in such a relatively short time. Perhaps if this country were not working under such pressure to improve its military weapons, things could be worked out more efficiently in a leisurely manner.

"I would like to have the speech before the Institute of Aeronautical Sciences considered in the light of what it was attempting to accomplish. I was endeavoring to enlist the support of the aircraft industry in a program to reduce costs. From a rhetorical point of view it would probably prove more difficult to elicit cooperation if I stood up and took the listeners to task than if I took the position of a somewhat less-than-perfect individual trying to meet with the members of the institute on a common ground to strive toward a real accomplishment."

If I can be of any further assistance to you or your subcommittee, do not hesitate to call upon me.

Sincerely yours,

PERKINS MCGUIRE,
Assistant Secretary of Defense (Supply and Logistics).

EXHIBIT I

DEPARTMENT OF THE NAVY, OFFICE OF NAVAL MATERIAL,
Washington, D. C., March 8, 1957.

Mr. HERBERT ROBACK,
Staff Director for the Military Operations Subcommittee,
House Committee on Government Operations,
House Office Building, Washington, D. C.

MY DEAR MR. ROBACK: In compliance with your recent request, I am forwarding data on manpower expenditures and planned increases related to Navy participation in the defense standardization program. These data are identical to those provided to the Assistant Secretary of Defense (Supply and Logistics) in response to his request of December 18, 1956.

Sincerely yours,

E. W. CLEXTON,
Vice Admiral, USN, Chief of Naval Material.

Report Control Symbol DD–S & L (Th) 56170
Navy Summary .....
Date .....

Defense standardization program—Report on personnel ceilings and onboard strength

Name of activity (bureau, field activity, or agency)	Fiscal year 1956		Fiscal year 1957									
	Onboard strength (rough estimates of man-year expenditures) as of—		1st quarter			2d quarter			3d quarter		4th quarter	
	Jan. 25, 1956	Jan. 30, 1956	Authorized ceiling (actual) (includes onboard strength)	Onboard strength at end of quarter	Estimated equivalent in contractual services [1]	Authorized ceiling (actual) (includes onboard strength)	Onboard strength at end of quarter	Estimated equivalent in contractual services [1]	Authorized ceiling (planned) (includes onboard strength)	Planned equivalent in contractual services [1]	Authorized ceiling (planned)	Planned equivalent in contractual services [1]
ONM (DepSO)	(2) 5	(2) 7	(2) 10	(2) 9	0	(2) 10	(2) 10	0	(2) 10	0	(2) 10	0
BuShips	390	390	390	390	0	480	390	0	480	0	480	0
BuOrd	67	62	116	60	21	120	65	21	120	25	120	25
BuDocks	24	30	70	30	0	70	30	0	70	0	70	0
MarCorps	(2) 5	(2) 5	(2) 6	(2) 6	0	(2) 6	(2) 6	0	(2) 6	0	(2) 6	0
BuMed [2]									(11) 84	0	(11) 84	0
BuSandA	(2) 86	(3) 86	(3) 124	(3) 111	0	(2) 176	(2) 143	0	(2) 265	2	(2) 271	5
BuAer [3]	(8) 108	(8) 114	(9) 118	(9) 114	0	(9) 127	(9) 113	0	(8) 170	0	(8) 170	0
Navy total	(14) 685	(15) 694	(16) 834	(16) 720	21	(15) 989	(15) 757	21	(25) 1, 205	27	(25) 1, 211	30

[1] Indicate the estimated or planned equivalent at end of quarter in terms of onboard strength that is available through contractual services.
[2] Effective with single manager assignment.
[3] Figures rounded to nearest whole number for totaling purposes.

NOTE.—Figures in parentheses indicate military personnel separately.

REPORT ON PERSONNEL CEILINGS AND ON BOARD STRENGTH

The Navy request to bureaus for the information required by the Assistant Secretary of Defense (Supply and Logistics) gave the following definitions for the several column headings:

1. Authorized ceiling (actual) or (planned)—Consists of the "onboard strength" plus additional billets authorized specifically for standardization but not filled.

2. Onboard strength at end of quarter—all significant standardization employment, including part-time efforts accumulated on the basis of 1800 man-hours per full-time billet.

3. Estimated (or planned) equivalent in contractual services—As explained on forms.

EXHIBIT J

ARMY, NAVY AND AIR FORCE ANSWERS TO QUESTIONS BY CONGRESSMAN LIPSCOMB

DEPARTMENT OF THE ARMY,
OFFICE OF THE SECRETARY OF THE ARMY,
Washington, D. C., June 13, 1957.

Mr. HERBERT ROBACK,
Staff Director, Military Operations Subcommittee,
New House Office Building, Washington, D. C.

DEAR MR. ROBACK: Reference is made to your letter of May 16 relative the hearings on defense cataloging and standardization programs, in which you requested replies from each military department to a series of questions on standardization posed by Congressman Lipscomb.

For ease in handling and reference, these questions are enumerated and answered individually.

I trust this information will be of assistance to your subcommittee.

Sincerely,

J. E. BASTON, Jr.,
Brigadier General, GS, Chief of Legislative Liaison.

DEPARTMENT OF THE ARMY

OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS

Washington, D. C.

Question 1. What are the specific standardization assignments given to your department?

Answer. The Office of the Assistant Secretary of Defense (Supply and Logistics) in the Directory of FSC class assignments, March 15, 1957, assigns 239 FSC class assignments to the Department of the Army. The Defense Standardization Program Directory of FSC class assignments is attached, enclosure 2.

Question 2. For which of the assignments have you developed detailed plans at the present time?

Answer. Detailed plans have been developed for eight FSC class assignments. The assignments by class and title follow:

FSC class	*and title*
1040	Chemical weapons and equipment
2210	Locomotives
2220	Rail cars
2240	Locomotive and rail car accessories and components
2250	Track materials, railroad
2610	Tires and tubes, pneumatic, except aircraft
4230	Decontaminating and impregnating equipment
5905	Resistors

Question 3. Give the size of the staff on the standardization organization of your department.

Answer. At the end of the third quarter of fiscal year 1957, the Department of the Army strength was 61 military and 1,437 civilian for a total of 1,498.

	Department of the Army personnel		Contractual equivalent, civilian	Total
	Civilian	Military		
DEPSO	6	4	0	10
Chemical Corps	56	34	14	104
Corps of Engineers	204	0	45	249
Ordnance Corps	549	14	80	643
Quartermaster Corps	241	0	6	247
Signal Corps	328	6	0	334
Transportation Corps	53	3	0	56
Total	1,437	61	145	1,643

Question 4. Do you believe that you are organized and staffed to implement DOD Directive 4120.3 effectively?

Answer. Yes.

Question 5. Do you believe that you have fully implemented DOD Directive 4120.3 effectively?

Answer. Yes.

Question 5 (a). Have you seen the request made by Mr. Lanphier to your Department referred to earlier in the hearings? (The reference is to a memorandum from Mr. Lanphier to the Assistant Secretaries of the three departments, dated December 21, 1956, requesting information on the implementation of Directive 4120.3).

Question 5 (b). Have you replied to Mr. Lanphiers request, and if not, how soon will you reply?

Answer. Yes.

Memorandum to ASD (Supply and Logistics), March 12, 1957, forwarded copies of directives from Department of the Army and the technical services to implement the defense standardization program, DOD 4120.3.

DEPARTMENT OF THE NAVY,
OFFICE OF THE SECRETARY,
Washington, June 7, 1957.

Mr. HERBERT ROBACK,
Staff Director, Military Operations Subcommittee,
Committee on Government Operations,
House Office Building, Washington, D. C.

MY DEAR MR. ROBACK: In response to your request, the Office of Naval Material has supplied data replying to the inquiries raised by Congressman Lipscomb in the course of this year's hearings on Defense cataloging and standardization. Answers, numbered as are Congressman Lipscomb's questions in your letter of May 16, 1957, appear in the following paragraphs.

(1) As worded, the inquiry applies only to the assignment of responsibility for standardization of material in designated Federal supply classification (FSC) classes, under the provisions of the Defense Standardization Manual, M201. The Navy has principal management responsibility for 183 FSC classes, tabulated and identified in enclosure (1) hereto. In those same classes, the Navy is a working partner with the Army and the Air Force in the processes of analysis, screening, technical study, and final documentation, all of which are a part of standardization. Similarly, the Navy is a working partner in each of the 327 FSC classes for which management responsibility is assigned to either the Army or to the Air Force. The ultimate workload derives from Navy participation in specific standardization projects as spelled out in applicable detailed plans. An important fact is that work in the "existing phase," on standardization projects originated without reference to detailed plans, currently absorbs more manpower than is involved under the FSC class assignment program. As of March 31, 1957, the Navy was responsible for 1,243 such projects.

(2) As of May 26, 1957, the Navy has completed the development and coordination of nine detailed plans, listed below, which have been submitted to the Department of Defense for approval.

FSC number and class title

1070 Nets and booms, ordnance
3428 Foundry equipment and supplies
4220 Marine lifesaving and diving equipment
5990 Synchros and resolvers
7510 Office supplies
7920 Brooms, brushes, mops, and sponges
8020 Paint and artists' brushes
8040 Adhesives [1]
8115 Boxes, cartons, and crates

Further, the Navy is committed to complete and submit an additional 18 detailed plans prior to July 1, 1957. These 18 detailed plans are in various stages of development and coordination, and every effort is being made to bring them to completion on schedule.

(3) The standardization organization in the Department of the Navy is diffused, at the bureau level and lower, because many people devote a fractional part of their time to this work. The management staff for this Department consists of the Departmental Standardization Office (DepSO), manned by 2 officers and 13 civilian personnel, all engaged full time in standardization. To support the defense standardization program, the Navy reported on April 30, 1957, the Navy furnishes manpower at a level equaling 941 full-time employees. In practice, less than 20 percent of the effort is furnished by full-time employees, and these are principally engaged in management and administration of the program or in the editorial and coordinating phase of preparing specifications and standards. Scientific and engineering personnel, for the most part, contribute to specifications and standards work as a duty collateral to their principal employment.

(4) The Department of the Navy is organized to implement Department of Defense Directive 4120.3 effectively; it is not presently so staffed. The best available summary of required manpower was computed by the Program and Planning Committee in developing current fiscal year programs. Existing and prospective deficits in the Navy staff are shown in the following tabulations:

	Fiscal year 1957	Fiscal year 1958
Computed requirement in equivalent man-years	1,073	1,145
Total Navy man-years available, June 30, 1956	709	
Deficit, June 30, 1956	364	
Total Navy man-years available, Apr. 30, 1957	941	
Deficit, Apr. 30, 1957	132	
Projected total Navy man-years available, June 30, 1957	950	
Projected deficit, June 30, 1957		195

Recruitment for the defense standardization program has been slow, despite increased emphasis and attention given to this program in fiscal year 1957. Hiring has always been difficult, even after ceilings are established, because of the continuing scarcity of qualified technical and engineering personnel. With some few exceptions, however, recruitment for this program is now halted, and previously established personnel ceilings have been withdrawn. This action is required by the order of the Secretary of Defense, in memorandum of March 18, 1957, to make a substantial reduction in the number of departmental personnel. (See SECNAV Notice 5300 of March 19, 1957, attached, with enclosed SECDEF memorandum of March 18, 1957.)

(5) The Department of the Navy has substantially implemented Department of Defense Directive 4120.3, and has so informed the Department of Defense in response to Mr. Lanphier's inquiry. The only major deficiency in Navy implementation to date is that no comprehensive review system has yet been established for "monitoring departures from standards and specifications." It is contemplated that such a system will be set up in due course, but available manpower is considered to be better applied in other standardization work at this time.

[1] Submitted, but returned for redrafting.

I hope that the information supplied above will satisfy your requirements. If it does not, please do not hesitate to call on me for any further information needed.

Sincerely yours,

F. A. BANTZ,
Assistant Secretary of the Navy (Material).

DEPARTMENT OF THE NAVY,
OFFICE OF THE SECRETARY,
Washington, D. C., March 19, 1957.

SECNAV Notice 5300

From: Secretary of the Navy.
To: Chief of Naval Operations.
Commandant of the Marine Corps.
Chiefs of bureaus, boards, and offices, Navy Department.
Subject: Reduction of military and civilian personnel in the departmental headquarters in the metropolitan Washington, D. C., area.
Enclosure: (1) SECDEF memo to military department Secretaries of March 18, 1957, same subject.

1. *Purpose.*—The purpose of this notice is to promulgate enclosure (1) for information of addressees.

2. *Planning.*—Enclosure (1) is forwarded in order that individual bureau and office planning may take place in advance of the reductions stipulated. Detailed instructions as to the distribution of the reductions and plans for effecting them will be forthcoming at an early date.

3. *Employment action.*—In view of the planned reductions, it is recommended that bureaus and offices fill civilian positions only when it is determined (1) that the job cannot be abolished or consolidated with another position, (2) that the job cannot be efficiently filled by transfer.

4. *Cancellation.*—This notice is canceled upon receipt of detailed implementation of enclosure (1).

CHARLES S. THOMAS.

THE SECRETARY OF DEFENSE,
Washington, March 18, 1957.

Memorandum for—
The Secretary of the Army
The Secretary of the Navy
The Secretary of the Air Force
Director of Administrative Service, OSD
Subject: Reduction of military and civilian personnel in the departmental headquarters in the metropolitan Washington, D. C., area.

Substantial reductions in personnel, both military and civilian, with corresponding savings, have been made in the total force structure since the cessation of hostilities in Korea. Further reductions can now be made by delegation of authority to subordinate commands, the elimination of unnecessary reports, reduction in volume of paperwork, and the elimination of unnecessary dual staffing or duplication of responsibility.

To achieve a more effective utilization of military and civilian personnel, the military and civilian strengths in the departmental headquarters of each military department and Office of the Secretary of Defense in the metropolitan Washington, D. C., area must be reduced by 12 percent of the December 31, 1956, actual strength at the rate of 1 percent per month for 12 months during fiscal year 1958. Reasonable deviation from the prescribed monthly increment is permissible to facilitate orderly personnel actions, but quarterly objectives should be met, and the scheduled reductions should be made as early in the fiscal year as possible. Reductions which have been accomplished or may be accomplished during the period January 1 to July 1, 1957, will be credited for reductions required during fiscal year 1958.

Reduction of military personnel will be accomplished through normal attrition as prescribed duty tours are completed and positions are vacated, insofar as possible.

Civilian reductions will be accomplished through normal attrition insofar as possible. For the remainder of fiscal year 1957 and fiscal year 1958, vacancies are to be filled only when it is determined (1) that the job cannot be abolished

or consolidated with another position, (2) that the job cannot be efficiently filled by transfer.

It is intended that personnel reductions be effected as evenly as practical in proportion to the existing grade-distribution pattern, and reductions are not to be confined to the lower grades in the case of either military or civilian personnel.

The actions directed herein will withdraw authority for use of the following strength elements by the end of fiscal year 1958, with such withdrawal being equally phased during each month of fiscal year 1958. These strength elements will not be subsequently approved for utilization without detailed justification to and approval by the Secretary of Defense. The authorized strengths for end fiscal year 1958 remain as contained in the fiscal year 1958 budget.

Reductions to be made

	Civilian	Military	Total
Departmental service	4,725	1,689	6,414
OSD	172	48	220
Army	1,718	461	2,179
Navy	[1] 2,166	592	2,912
Marine Corps		154	
Air Force	669	434	1,103

[1] Includes Marine Corps civilian employees.

The intent of this memorandum is not to be voided by use of extensive temporary duty by detail of individuals from other activities, or by the increased use of contract personnel or similar action.

By the Metropolitan Washington, D. C., area is meant the District of Columbia; Montgomery and Prince George Counties in Maryland; Alexandria and Falls Church Cities; and Arlington and Fairfax Counties in Virginia.

The term "departmental headquarters" is defined to represent the personnel assigned to the Offices of the Secretary of Defense and the headquarters of the departments "at the seat of the government" including personnel serving in departmental positions as determined by the work performed, regardless of geographic location.

Personnel on duty with the Standing Group of the North Atlantic Treaty Organization, the Court of Military Appeals, and the Office of the Joint Chiefs of Staff have been excluded. By separate correspondence, however, the offices herein excluded will be asked to report what reductions are feasible.

Consideration will be given later to a comparable reduction of the headquarters staffing of major subordinate administrative, logistical, and operational commands of the services, joint and unified commands, and United States elements of Allied commands, the reference date for such reductions to be March 31, 1957.

C. E. WILSON.

DEPARTMENT OF THE AIR FORCE,
OFFICE OF THE SECRETARY,
Washington, May 28, 1957.

Hon. CHET HOLIFIELD,
Chairman, Military Operations Subcommittee,
Committee on Government Operations House of Representatives

DEAR MR. CHAIRMAN: I refer to your letter of May 16, 1957, submitted by your staff director, Mr. Herbert Roback, in which you requested that the Air Frce furnish a written response to specified questions on standardization.

For ready reference the questions and answers have been set out in the attached enclosure, which, I trust, will satisfy the requirements of the committee.

Sincerely yours,

JOE W. KELLY,
Major General, USAF,
Director, Legislative Liaison.

Question. What are the specific standardization assignments given to your department?

Answer. A Directory of FSC Class Assignments to the Military Departments is attached as tab A. This document is considered to be very comprehensive

in that it reflects all of the assigned classes, to which department they are assigned, and the departments that have participation responsibility. The column headed "Assignee Activity" designates the department to which the FSC is assigned for standardization.

Question. For which of these assignments have you developed detailed plans at the present time?

Answer. As of the end of the third quarter fiscal year 1957, the Department of the Air Force was current by having submitted detailed plans on the following FSC classes: FSC 9530, FSC 9525, FSC 6930, and FSC 9130. The detailed plans scheduled for the fourth quarter of fiscal year 1957 are in the process of coordination with Army and Navy, and it is anticipated they will be submitted to the Department of Defense as scheduled.

Question. Give the size of the staff in the standardization organization of your department.

Answer. There are, within the Air Force, 10 personnel assigned to the standardization organization established by section X of Department of Defense Directive 4120.3. The functions of this office are divided between a policy office in Headquarters, Air Force, and a management office at Headquarters, Air Materiel Command, Wright-Patterson Air Force Base. These two offices provide the overall coordination and management of the DOD standardization program for the Air Force as required by the referenced section of DOD Directive 4120.3, and do not, of course, include operational personnel.

Question. Do you believe that you are organized and staffed to implement Department of Defense Directive 4120.3 effectively?

Answer. At the present rate of implementation of the Defense standardization program, the number of personnel assigned to these functions is sufficient to accomplish the objectives of Department of Defense Directive 4120.3.

Question. Do you believe that you have fully implemented Directive 4120.3?

Answer. With the exception of the requirement for reporting waivers and deviations from specifications and standards as required by section 7D1, Department of Defense Directive 4120.3, this directive is considered to be fully implemented within the Department of the Air Force. You will note that section 7D1 states that, "Authorized waivers and deviations to standards will be reported periodically to the Assistant Secretary of Defense (Supply and Logistics) in accordance with separate instructions." Separate instructions for such reporting have not been received from the Department of Defense; however, Headquarters, Air Force, has recently instructed field activities to establish procedures and channels for such reporting.

Question. Have you seen the request made by Mr. Lanphier to your department referred to earlier in this hearings? (The reference is to a memorandum from Mr. Lanphier to the Assistant Secretaries of the three departments, dated December 21, 1956, requesting information on the implementation of Directive 4120.3.)

Have you replied to Mr. Lanphier's request, and if not, how soon will you reply?

Answer. The request made by Mr. Lanphier requesting information on the implementation of Department of Defense Directive 4120.3 was replied to by memorandum from the Assistant Secretary of the Air Force, dated April 30, 1957.

EXHIBIT K

DEFENSE STANDARDIZATION PROGRAM FOR FISCAL YEAR 1956 AND PROGRAM GUIDANCE FOR FISCAL YEAR 1957

ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D. C., August 23, 1955.

Memorandum for the—
Assistant Secretary of the Army (Logistics and Research and Development)
Assistant Secretary of the Navy (Material)
Assistant Secretary of the Air Force (Materiel)

Subject: Defense standardization program—program for fiscal year 1956

References:
(*a*) DOD Directive 4120.3, Defense standardization program dated October 15, 1954

(*b*) Military Manual for Standardization M201, dated June 23, 1955
(*c*) ASD (Supply and Logistics) memo, SS–2, to Procurement Secretaries, dated May 23, 1955, subject: Defense standardization program—Program guidance for fiscal year 1956
(*d*) ASD (Supply and Logistics) memo to Procurement Secretaries, dated June 2, 1955, subject: Assignment of FSC classes for standardization and additional program guidance, fiscal year 1956
(*e*) SAEA (Logistics and Research and Development) memo to ASD (Supply and Logistics, dated July 20, 1955, subject: Defense standardization program
(*f*) ONM memo to ASD (Supply and Logistics), dated July 25, 1955, subject: Standardization program guidance for fiscal year 1956
(*g*) AF memo to ASD (Supply and Logistics), dated July 21, 1955, subject: Defense standardization program—program guidance for fiscal year 1956

This memorandum transmits the Defense standardization program as contained in enclosure 1 and its attachments A through E to be accomplished by the military departments in fiscal year 1956. This program for fiscal year 1956 has been coordinated with the military departments by means of references (*c*), (*d*), (*e*), (*f*), and (*g*).

To the extent that the program established by this memorandum and its attachments requires fund support which is in excess of the amounts provided standardization in the fiscal year 1956 budgets as submitted to the Congress, it is requested that the military departments provide funds through reprograming of available resources. In the event a department determines that reprograming is not feasible and additional budgetary support is required, the additional budgetary requirements should be submitted to the Office of the Assistant Secretary of Defense (Comptroller). The military departments should similarly advise this office of such actions. In addition, it is requested that each military department perform a continuous review during fiscal year 1956 of its assignments and that this office be notified as soon as possible of any assignments which are falling behind schedule in order that corrective action may be taken in time to assure the scheduled completion of such assignments.

T. P. PIKE,
Assistant Secretary of Defense

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D. C., August 18, 1955.

THE DEFENSE STANDARDIZATION PROGRAM FOR FISCAL 1956

I. General

This document establishes the work schedules for the defense standardization program for fiscal year 1956. These work schedules provide for the existing phase of the program and for the new phase as outlined in DOD Directive 4120.3, dated October 15, 1954.

II. Program phases

Transition from the existing phase to the new phase of the program will be partially effected during fiscal year 1956. To effect this transition in an orderly manner, a proper sequence of operations has been established by the Military Manual for Standardization M201, dated June 23, 1955, and the following:

A. Projects under the existing phase of the program will be expedited in order to accomplish the maximum standardization during fiscal year 1956 and to reduce to a minimum the number of such projects preparatory to the progressive entrance into the new phase of the program by Federal supply classes. The existing phase of the program will progressively terminate as detailed plans by FSC classes under the new phase are approved. Projects under the existing phase will continue to be initiated and processed whenever the need for such projects arise in accordance with manuals DSMA M2, B3, M4, M5 and M6 until such time as the applicable FSC detailed plan has been approved.

B. Standardization to be accomplished under the new phase of the program will be in accordance with DOD Directive 4120.3 which provides for the assignment of standardization responsibility to the military departments by complete FSC classes. Assistant Secretary of Defense (Supply and Logistics) memorandums dated March 9, 1955, and June 2, 1955, assigned 506 FSC classes to the mili-

tary departments. Operations under the new phase will be in accordance with the military manuals in the M200 series.

C. During fiscal year 1956 and throughout the remainder of the transition period, two sets of procedures will be in effect; the present procedures contained in manuals DSMA M2, M3, M4, M5, and M6 will be applicable to the existing phase, and the military manuals in the M200 series will be applicable to the new phase.

III. Program for fiscal year 1956

A. *Existing phase.*—1. Standardization projects, under the existing phase of the program, which are scheduled for completion during fiscal year 1956 are listed on attachments A and B.

(*a*) Attachment A lists all projects that were active as of June 30, 1955. The military departments, in their replies to ASD (S. and L.) memorandums dated May 23, 1955, and June 2, 1955, on defense standardization program guidance, recommended for completion during fiscal year 1956 those projects annotated (A, N, or AF) on this list. Attachment A is furnished to the military departments to assist them in fulfilling their responsibilities for this portion of the fiscal year 1956 standardization program.

(*b*) In addition to the projects annotated on attachment A for completion during fiscal year 1956, this office has scheduled certain other well advanced projects for completion during fiscal year 1956. These projects are listed on attachment B.

2. In order for the defense standardization program to complete approximately 75 percent of the projects outstanding as of June 30, 1955, it will be necessary for the military departments to review all projects not scheduled for completion during fiscal year 1956 for the purpose of scheduling additional projects for completion during fiscal year 1956. Accordingly, it is requested that the military departments perform this review as soon as practicable and advise the Standardization Division of the additional projects to be scheduled for completion. Special consideration should be given to those nonscheduled projects which are in an overdue status. In addition, old projects should be reviewed for possible discontinuance when it appears that little or no standardization potential exists.

3. As of June 30, 1955, there were approximately 50 active standardization projects assigned to the Armed Services Electro Standards Agency (ASESA), and there were approximately 20 active projects assigned to the Aeronautical Standards Group (ASG). Records in the Standardization Division indicate that these projects will be substantially completed during fiscal year 1956.

4. Standardization projects assigned to the medical activities of the military departments will be scheduled for completion at a later date. The Armed Services Medical Procurement Agency (ASMPA) is currently preparing a preliminary report for submission to the Standardization Division. A supplemental list of projects to be completed during fiscal year 1956 for medical items will be issued after a review has been made of the preliminary report.

5. Attachment C contains information pertaining to standardization task groups falling within FSC classes for which detailed plans, under the new phase of the program, are not scheduled for completion in fiscal year 1956. (See attachment D–1.) The status of current assignments and planned accomplishments for fiscal year 1956 are given for each such task group. Attachment C provides the military departments with information on this portion of the program and is to be used in planning for their participation in these groups.

6. The military departments have reported their estimates of the number of new projects under the existing phase of the program planned for initiation during fiscal year 1956. This information is tabulated below to assist the military departments in planning for the workload involved by their participation in this portion of the program:

Type	Army	Navy	Air Force	Total
New specifications	316	127	55	498
Revised or amended specifications	183	83	35	301
New standards	54	39	45	138
Revised or amended standards	7	18	25	50
Handbooks	2	0	0	2
Total	562	267	160	989

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7. The military departments shall make provision during fiscal year 1956 for the preparation of such limited coordination specifications and related documents as may be required for procurement support. In addition, each military department is to plan for the review of those limited coordination documents prepared by the other military departments in order to determine which of them should be developed into coordinated documents.

B. *New phase.*—1. The fiscal year 1956 schedule for standardization planning and the initiation of operations under the new phase of the defense standardization program is contained in attachment D–1. As shown on this attachment, 124 preliminary reports and 73 detailed plans for Federal supply classes are scheduled for completion. It will be noted that attachment D–1 contains certain changes and additions to that submitted by the military departments in reply to Assistant Secretary of Defense (Supply and Logistics) memorandums requesting comments in proposed fiscal year 1956 program guidance. Each military department shall take cognizance of the provisions of the Military Manual for Standardization M201 concerning the establishment of subassignments for portions of FSC classes based on major supply interests and technical competence. In this connection, reference is made to Assistant Secretary of Defense (Supply and Logistics) memorandum, dated June 2, 1955, wherein specific sub-assignments were established within FSC classes assigned to the military departments.

2. Supplemental guidance has been developed for most of the FSC classes for which detailed plans are scheduled during fiscal year 1956. This information, contained in attachments D–2 through D–26, is generally in the form of recommendations and is intended to assist the "assignee" departments in the development of detailed plans. The Standardization Division may be able to furnish supplemental guidance from time to time as experience is gained in this part of the new program. The "assignee" departments should contact the staff of the Standardization Division in this regard.

3. Attachment E lists those FSC classes which have been previously assigned on the dates indicated. Since these classes are in advanced states of planning, no supplemental guidance information is furnished. The "assignee" military departments shall proceed, in close collaboration with the other military departments and the staff of the Standardization Division, with the development of detailed plans and the completion of individual projects in accordance with the Military Manual for Standardization M201 for the classes listed in attachment E. The military departments shall provide for increased standardization effort in those FSC classes during fiscal year 1956.

C. *Managerial effort.*—1. Each military department, in accordance with DOD Directive 4120.3 and the Military Manual for Standardization M201, shall provide the required managerial effort necessary to plan, direct, and accomplish those portions of the defense standardization program assigned to that military department for completion during fiscal year 1956.

SUPPLY AND LOGISTICS, SS–2

OCTOBER 19, 1955.

Memorandum for—
Assistant Secretary of the Army (Logistics)
Assistant Secretary of the Navy (Material)
Assistant Secretary of the Air Force (Materiel)

Subject:
Defense standardization program—Program guidance for fiscal year 1957

References:
(*a*) Military Manual for Standardization M201, dated June 23, 1955
(*b*) ASD (S&L) Memorandum to Procurement Secretaries dated August 23, 1955, Subj.: Defense Standardization Program for fiscal year 1956

This memorandum together with its enclosure provide program guidance to the military departments for the fiscal year 1957 defense standardization program. Although chapter 5 of reference (a) and previous correspondence indicate that additional program guidance would not be forthcoming for fiscal year 1957, it is believed desirable to provide the enclosed guidance material in order to assist the military departments to develop their respective portions of the 1957 program in accordance with uniform criteria.

The enclosure outlines and describes the major elements to be programed during fiscal year 1957. It is recognized that this program guidance cannot, at this time, be fully definitive because of limited experience under the new phase of the

program. Accordingly, it is requested that each military department exercise considered judgment when programing for the elements under the new phase of the program. In this connection, it is further requested that the military departments supplement their proposed programs with comments explaining any planning criteria including workload factors used for determining man-year requirements other than that contained in the enclosure. These comments will serve to assist this office in evaluating the proposed programs.

Program planning, to be fully effective and realistic for a joint-participating program such as this one, must be adequately coordinated within and between the military departments. Therefore, it is requested that each department take the necessary steps to assure that this coordination is accomplished during the development of its proposed program.

Departmental portions of the proposed defense standardization program for fiscal year 1957 are to be transmitted to this Office by November 30, 1955.

DEFENSE STANDARDIZATION PROGRAM GUIDANCE FOR FISCAL YEAR 1957

I. INTRODUCTION

This program guidance is designed to assist the military departments in their program planning task and to assure that the proposed programs developed in coordination with the other military departments will be based on uniform planning criteria, and will be comparable in content. Proposed programs thus developed by the military departments can be more accurately evaluated by this Office and consolidated into a single defense standardization program for fiscal year 1957.

II. PROGRAM GUIDANCE

The several elements comprising the fiscal year 1957 defense standardization program are outlined below. Definitive program workloads are given for each element where sufficient data exists in this office. Attachment A is a chart summarizing these workload elements. This chart, together with other supporting program data as called for below, is to be completed by each military department and transmitted to this office. It will be noted that estimated man-year requirements are requested for each workload element.

a. Existing phase

1. Each military department will program for the completion during fiscal year 1957 of the following minimum number of existing projects estimated to be outstanding at the beginning of fiscal year 1957:

Army	600
Navy	410
Air Force	160

Because of the changing status of these projects, a list of specific projects to be completed during fiscal year 1957 is not requested at this time.

2. Each military department is to furnish estimates of the number of new, revised, and amended specification and standard projects for which it anticipates initiating under the existing phase during fiscal year 1957.

3. For the projects to be initiated during fiscal year 1957 per the above paragraph, each department is to further estimate the number of these projects for which completion is planned during fiscal year 1957. These projects are in addition to those cited in paragraph 1 above.

b. New phase

1. Each military department will program for the completion of preliminary reports covering the following minimum number of FSC classes during fiscal year 1957:

Army	60
Navy	60
Air Force	30

Each assigned department is to furnish this office with a list of the specific FSC classes for which preliminary reports are recommended for scheduling during fiscal year 1957. This list is to indicate the fiscal year quarter in which each report is to be scheduled for completion.

2. Each military department will program for the completion of detailed plans covering the following minimum number of FSC classes during fiscal year 1957:

Army	30
Navy	50
Air Force	20

Each department is to furnish this Office with a list of the specific FSC classes for which detailed plans are recommended for scheduling during fiscal year 1957. This list is to indicate the fiscal year quarter in which each plan is to be scheduled for completion.

3. Major standardization effort will be programed by each military department to provide capacity for fulfilling its commitments in accordance with detailed plans which are approved and in an implemented status during fiscal year 1957. Definitive guidance cannot be given for this element of the new phase of the program because of the, as yet, nonexistence of approved detailed plans. Therefore, each department, after considered evaluation of this workload, will program for this major element in terms of estimated man-year requirements. The following criteria is furnished to assist in this evaluation:

(*a*) "Assignee" and "participating" responsibilities for each department will be programed separately on the basis of the following numbers of FSC classes for which detailed plans will be in an implemented status during fiscal year 1957:

Army	111
Navy	39
Air Force	20

(*b*) For program planning purposes, each miiltary department should provide workload capacity sufficiently to complete 50 percent of the simplification and its related documentation for the above numbers of FSC classes.

(*c*) To estimate the extent of the standardization effort required during fiscal year 1957 for this number of FSC classes, each military department should review the specific FSC classes for which detailed plans are scheduled for completion during fiscal year 1956. Based on this review, estimated average "assignee" and "participating" workload factors can be computed. These factors can then be applied to the above number of FSC classes for which detailed plans will be in an implemented status during fiscal year 1957.

(*d*) In addition, each military department will program for the completion of the following number of projects which will be transferred to the new phase from the existing phase of the program.

Army	170
Navy	115
Air Force	45

c. Limited coordination documents

1. Each military department is to furnish estimates to this office on the numbers of new, revised, and amended limited coordination specifications and standards to be programed during fiscal year 1957.

d. Managerial support

1. Each military department will program for adequate managerial support within its Department Standardization Office and headquarter offices of the services, bureaus, or commands. Managerial support will include the responsibilities under the existing phase and under the new phase of the program as established in the Military Manual for Standardization M201.

Summary chart proposed fiscal year 1957 defense standardization program by Department of the _____

Program elements	*Units of work*	*Estimated man-year requirements*
A. Existing phase (total)	XXXX	_____
1. Completion of existing projects	_____	_____
2. Initiation of new projects	_____	_____
3. Completion of new projects	_____	_____
B. New phase (total)	XXXX	_____
1. Completion of preliminary reports	_____	_____
2. Completion of detailed plans	_____	_____
3. "Assignee" workload under approved detailed plans	XXXX	_____
4. "Participating" workload under approved detailed plans	XXXX	_____
C. Limited coordination documents	_____	_____
D. Managerial support	XXXX	_____
Total man-years	XXXX	_____

EXHIBIT L

SECRETARY OF DEFENSE MEMORANDUM REQUESTING THAT DEFENSE STANDARDIZATION PROGRAM BE SUPPORTED AND EXPEDITED

THE SECRETARY OF DEFENSE,
Washington, January 25, 1956.

Memorandum for the—
Secretary of the Army
Secretary of the Navy
Secretary of the Air Force
Assistant Secretaries of Defense
The General Counsel

Subject: Defense standardization program

References:

(*a*) SECDEF memo to the above addresses, dated October 14, 1955, Subject: General Guidelines for fiscal year 1956 and 1957

(*b*) DOD Directive 4120.3 dated October 15, 1954, Subject: Defense Standardization Program

(*c*) Defense Cataloging and Standardization Act of 1952, Public Law 436, 82d Congress, 2d session

(*d*) ASTSECDEF memo to Material Secretaries, dated August 23, 1955, Subject: Defense Standardization Program—program for fiscal year 1956

(*e*) ASTSECDEF memo to Material Secretaries, dated October 19, 1955, Subject: Defense Standardization Program—program guidance for fiscal year 1957

The purpose of the defense standardization program, as indicated in references (*b*) and (*c*), is to promote greater economy and efficiency throughout logistic support operations of the Department of Defense. It is recognized that this program offers substantial immediate and long-term benefits. The defense standardization program is recognized as an economy program. The successful pursuit of this program, as specified in reference (*b*), will contribute materially to the attainment of the economy objectives expressed in reference (*a*).

Accordingly, all elements concerned within the Department of Defense will take immediate steps to support and expedite this program. Each military department will provide for the completion, by the end of fiscal year 1957, of the fiscal year 1956 program established by reference (*d*) and the program planned for fiscal year 1957 as described in reference (*e*). If it is determined that additional resources are required, the military department will obtain the additional funds and personnel required to accomplish the fiscal year 1956 and fiscal year 1957 programs as stated above through the reprograming of its available resources in accordance with existing instructions. In the event a military department is unable to obtain the funds through reprograming, the Assistant Secretary of Defense (Comptroller) will be advised of the additional funds required together with supporting justification. The Assistant Secretary of Defense (Supply and Logistics) will be kept informed by copy of correspondence covering such action.

Reprograming, as outlined above, for the remaining portion of fiscal year 1956 is to be completed by February 15, 1956. Each military department will submit to the Assistant Secretary of Defense (Supply and Logistics by February 25, 1956, a revised program to be accomplished by June 30, 1956.

C. E. WILSON.

Signature authenticated by :

J. S. TWITCHELL
(For Henry E. Lofdahl, Chief, Correspondence Control Section).

EXHIBIT M

ASSIGNMENT OF FSC CLASSES

ASSISTANT SECRETARY OF DEFENSE,
Washington, D. C., June 2, 1955.

Memorandum for the—
Assistant Secretary of the Army (Logistics and Research and Development)
Assistant Secretary of the Navy (Material)
Assistant Secretary of the Air Force (Materiel)

Subject: Assignment of FSC classes for standardization and additional program guidance, fiscal year 1956

My memorandum of March 9, 1955, assigned 394 Federal supply classes for standardization to the military departments. This memorandum also established an ad hoc committee to develop recommendations on the assignment of those Federal supply classes for which there were conflicting claims by the military departments.

The final report of the ad hoc committee, submitted under date of May 31, 1955, shows that the committee did not reach agreement on 25 of the 88 contested classes. In accordance with the recommendation of the committee that the disposition of these classes be made by me, I am assigning 23 classes at this time; 2 others are being withheld from assignment. The disposition of all 88 classes is shown in enclosure 1. This enclosure also lists assignments which resulted from recommendations made by the advisory group, or from adjustments not requiring recommendations by the ad hoc committee. The assignments to the military departments forwarded with this memorandum are effective this date.

Of the 517 existing Federal supply classes, assignments made to date under the defense standardization program total 506. The remaining 11 classes are unassigned either because they lack a standardization potential or are being withheld for further clarification. These classes are listed in a summary of the current status of FSC assignments, forwarded as enclosure 2.

Some of the classes assigned in the attached list have a far greater standardization potential than some of those contained in the proposed program guidance for fiscal year 1956, submitted for your comments and recommendations with my memorandum of May 23, 1955. It is, therefore, requested that your replies to that memorandum take into consideration the relative priority that should be given to some of the newly assigned classes, as compared with the priority of those listed in attachments B and C to the proposed program-guidance document. With this objective in mind, the military departments may find it desirable to add newly assigned classes to their 1956 program, or to substitute classes of higher priority or greater military significance for those now listed in the proposed

schedule. Where such a recommendation is made by a military department, it should be accompanied by the information required in subparagraphs (c) and (d) of my memorandum of May 23. In the light of this request, the scheduled date for submittal of comment on the proposed program guidance is extended to July 1, 1955.

Attached as enclosure 3 is a preliminary list of FSC classes for inclusion in fiscal year 1956 program, developed by our staff for internal use. This is being furnished as a possible guide in the selection of additional or substitute classes.

T. P. PIKE,
Assistant Secretary of Defense.

Status of FSC class assignments as of June 2, 1955

Total number of FSC classes assigned 506

Agency	Mar. 9, 1955	June 2, 1955	Total
Army	204	36	240
Navy	127	42	169
Air Force	53	33	86
ASHPA	10		10
NSA		1	1
Total	394	112	506

Total number of classes withheld from assignment		11
Lacking standardization potential	6	
8810 8820 9610 9915 9999 7650		
Withheld for future consideration	5	
1050 1060 1090 1335 1385		
Total number of FSC classes		517

EXHIBIT N

DOCUMENTS ON CLOTHING AND TEXTILE STANDARDIZATION

JUNE 3, 1955.

From: Chief of Naval Material.
To: Commandant of the Marine Corps.
Chief, Bureau of Supplies and Accounts.
Subject: Acceleration of standardization for clothing, textiles, footwear, and applicable packaging.
Re: (a) CWM instruction 4230.50 of July 26, 1954.
Enclosure: (1) Copy ASTSCEF (S. & L.) memo SS–5 of May 19, 1955, to ANTSECNATMAT and ASTSACAIRFORCE (Material)

1. Enclosure (1) is forwarded for guidance of designated Navy and Marine Corps members of the Department of Defense (DOD) Standardization Coordinating Committee—Clothing, Footwear, and Textiles.

2. This office has received no prior indication that the rate of progress of work under the clothing, footwear, and textiles plan was less than satisfactory. It is requested that the Chief of Naval Material be advised of any deficiencies developed in the implementation procedures set out in paragraph 4 of reference (a). This Office is prepared to furnish any additional guidance which may be required in this regard.

W. H. HOWE.

By direction.

ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D. C., May 19, 1955.

Memorandum for the
Assistant Secretary of the Navy (material)
Assistant Secretary of the Air Force (materiel)
Subject: Acceleration of standardization for clothing, textiles, footwear, and applicable packaging.

Re: (a) ASD(S. & L.) memo addressed to Assistant Secretary of the Army, subject as above.

A copy of reference (a) is attached for your information.

It is requested that your Department take such action as may be necessary to enable effective collaboration in an accelerated interdepartmental standardization program for clothing, footwear, and textiles, as indicated in reference (a).

T. P. PIKE.

ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D. C., May 19, 1955.

Memorandum for the Assistant Secretary of the Army (Logistics and R. & D.).
Subject: Acceleration of standardization for clothing, textiles, footwear, and applicable packaging.
References:

(a) ASD(S&L) memo 7 Oct 1953 to Asst Sec Army, Navy, AF, Subj: ASTAPA
(b) ASD(S&L) memo 8 May 1954 to Under Sec Army, Subj: Proposed Standardization Plan for Clothing, Textiles and Footwear, Including Applicable Packaging
(c) DOD Textile & Apparel Standardization Program, Simplification Schedule, End Items: incl 4 to 3d Ind 14 Apr 1955, Dept Army, File: LOG/E3–13289 to Staff Dir for Stdzn, OASD (S&L), Subj: Semi-Annual Report on Standardization of Textiles, Apparel, Related Items, and Packaging

By reference (a) the Department of the Army was assigned responsibility for the standardization mission formerly assigned to ASTAPA. By reference (b) the scope of this assignment was clearly defined and a plan approved for the discharge of this responsibility.

It is urgent that very substantial and continuing progress in the standardization program for this area be achieved, as this is a key area in which the realization of improved supply management practices may well rest upon attaining a greater degree of standardization among the services.

While a few individual standardization projects have been completed under this assignment, the overall progress has been slow. Recent findings of the Hoover Commission and congressional hearings lay emphasis to the need for accelerated accomplishment in this area.

Reference (c), copy attached, is a program schedule for standardization in this area recently submitted by the Army. This schedule does not indicate an acceptable projected rate of progress with respect to the end-item simplification projects. Also, it does not schedule completion of any currently established extension projects, or specification or packaging projects. It is requested that this program be accelerated by the assignment of sufficient resources to complete all scheduled end-item simplification projects, and to schedule and complete as many of the foreseeable related extension, specification, or packaging projects as is possible by the end of fiscal year 1956. Acceleration of this program must not be permitted to retard progress in currently assigned standardization programs in other areas.

It is requested that a new program schedule similar to reference (c) be submitted, reflecting the revised planning to meet the program objectives stated in paragraph 4 above. Data on extension, specification, or packaging projects where feasible are to be included.

A reply to this letter containing the new program schedule and information on Department of the Army plans to accelerate this program is requested within 30 days of the date of this letter.

The Air Force and the Navy have been advised of this letter and requested by Inclosures (2) to collaborate as may be necessary to implement the accelerated program.

T. P. PIKE.

DOD textile and apparel standardization program, simplification schedule

END ITEMS

		Start	Completion
7105	Mattresses	May 1, 1954	Completed.
7210	Household furnishings	July 15, 1954	July 1, 1955.
8315	Notions and apparel findings (end items only)	Jan. 1, 1956	June 30, 1956.
8335	Shoe findings (end items only)	June 15, 1956	Dec. 30, 1957.
8340	Tents and tarpaulins	May 1, 1954	Completed.
8345	Flags and pennants	Mar. 31, 1955	June 30, 1956.
8405	Outerwear, men's	Feb. 15, 1955	June 30, 1957.
8410	Outerwear, women's	June 1, 1956	Nov. 30, 1957.
8415	Clothing, special-purpose	May 15, 1955	Mar. 31, 1957.
8420	Underwear and nightwear, men's	Apr. 1, 1956	Sept. 30, 1956.
8425	Underwear and nightwear, women's	Apr. 15, 1956	Aug. 30, 1956.
8430	Footwear, men's	Mar. 30, 1954	Feb. 1, 1956.
8435	Footwear, women's	do	Mar. 1, 1956.
8440	Hosiery, handwear and clothing accessories, men's	June 20, 1954	Mar. 31, 1956.
8445	Hosiery, handwear and clothing accessories, women's	May 1, 1956	Oct. 30, 1956.
8455	Badges and insignia	July 1, 1955	June 30, 1957.
8460	Luggage	July 1, 1956	Feb. 28, 1957.
8465	Individual equipment	Aug. 15, 1954	Apr. 1, 1956.

MATERIALS

8305	Textile fabrics	Program for review of parts and materials to follow end item simplification program.
8310	Yarn and thread	
8315	Notions and apparel findings (other than end items)	
8320	Padding and stuffing materials	
8325	Fur materials	
8335	Shoe findings (other than end items)	
8330	Leather	

ASSISTANT SECRETARY OF DEFENSE

SUPPLY AND LOGISTICS,
Washington, D. C., December 12, 1955.

Memorandum for—
Assistant Secretary of the Army (Logistics)
Assistant Secretary of the Navy (Material)
Assistant Secretary of the Air Force (Materiel)

Subject: Standardization of textiles, clothing, and individual equipment, FSC groups 83 and 84 and class 7210

Lack of standardization in the clothing and textile fields has been highlighted in recent years by congressional hearings, newspaper publicity, and Hoover Commission findings. Consideration of the problem indicates that this concern is not without justification in terms of an existing potential for standardization.

I therefore desire that standardization in this area be pressed forward as rapidly and as fully as possible. However, recognizing the role of distinctiveness of uniforms in maintaining high service morale, and the fact that high service morale is essential to continued combat readiness and effectiveness, I am furnishing the following guidelines on service distinctiveness in items, for carrying on this work:

(1) Major items of dress uniforms will not be subject to standardization as regards major and readily apparent features of design, key outer material, and color. They will be subject to standardization as regards secondary or inconspicuous material, and as regards nonsignificant, or not readily apparent differences in any aspect, such as color, material, or design.

(2) Secondary items of dress uniforms will not be subject to standardization in a manner which would cause incompatibility with the other items with which they are to be worn. In all other respects they will be subject to complete standardization.

(3) All other clothing, including combat, field, fatigue and special purpose clothing and underwear, and all individual equipment, will be subject to complete standardization insofar as functionality permits, with any desired distinctiveness to be obtained by use of separate items of appropriate insignia, emblems, shoulder patches, or similar devices.

(4) Blankets, towels, bedspreads, table linen and other items in FSC Class 7210: Household Furnishings, will be subject to complete standardization ex-

cept in cases of justifiable functional differences. They will not carry distinctive service markings where such markings would preclude any desirable standardization.

(5) Ribbons, insignia, brassards and other items in FSC class 8455, will not be subject to standardization as regards significant features of heraldic symbolism, design, and compatibility with other items. They will be subject to standardization as regards nonsignificant aspects of materials, design, and color.

(6) Except as provided above, all fabrics will be subject to complete standardization insofar as functionality permits.

It is requested that the Army as standardization asignee for this area develop a coordinated interdepartmental list of the dress uniform items or categories of items, recommending which are to be considered major items and which are to be considered secondary items for the purpose of establishing standardization eligibility under the above criteria. Any recommended exemptions from these criteria may be indicated for specific characteristics of a listed item or type, where appropriate. The list should be submitted to this office for approval within 90 days of this date.

T. P. PIKE.

EXHIBIT O

1953 DEPARTMENT OF DEFENSE DIRECTIVE ON STANDARDIZATION

February 2, 1953.
Number 41203.

DEPARTMENT OF DEFENSE DIRECTIVE

Subject: Department of Defense Standarization Program.

I. PURPOSE

The purpose of this directive is to outline the Department of Defense standardization program under Public Law 436, 82d Congress.

II. OBJECTIVES

The fundamental objectives of standardization are to increase the combat effectiveness of the military forces; and to conserve money, manpower, time, production facilities and natural resources. These objectives will be reached within the Department of Defense by:

(*a*) Achieving the highest practicable degree possible in the standardization of items through the development and use of single specifications and the elimination of overlapping and duplicating item specifications.

(*b*) Reducing the number of sizes, kinds, or types of generally similar items in the miltary supply system and insuring the interchangeability of component parts of equipment.

(*c*) Achieving the greatest practicable degree of standardization of methods for preservation, packaging, packing and marking of military supply items.

III. PLAN

1. The approach will be to study entire areas or categories of material for standardization feasibility. Determination of the areas will be made by the Defense Supply Management Agency (DSMA) on the basis of planned major procurement, review of existing standards and specifications, analysis of cataloging data and of field reports, announced plans of the Joint Chiefs of Staff, and other related and governing information. As these studies disclose the most rewarding fields for standardization, projects to accomplish the standardization will be assigned by DSMA to the military departments and their respective services, bureaus or commands and to joint agencies, when practical and consistent with their capacity and supply interest. The DSMA will establish priorities and time limits for the completion of each project of the standarization program. Upon completion of standardization projects, the results thereof will be submitted to the DSMA for approval and promulgation.

2. The results of the standardization program will be uniform requirements in common areas. Standards will be issued by DSMA as applicable to insure

uniform designs, materials, and interchangeable component parts of end items or equipment. The standards will include uniform processes and practices essential to the manufacture, packaging, packing, inspection and acceptance of these items or equipment. The standards will be mandatory for use by the Department of Defense, and will be reflected in specifications in that the latter will cover the sizes, kinds and types of material established by the standards. Procedures to insure the use of applicable specifications will be prescribed by separate directives.

IV. DISPOSITION OF EXISTING DEPARTMENTAL SPECIFICATIONS

Existing departmental, bureau, service, or activity specifications will be converted to the military or Federal series of specifications, or canceled by July 1955. Schedules for the orderly accomplishment of this project will be developed by the military departments and submitted to DSMA for approval within 60 days from the date of this directive.

V. COORDINATION WITH GENERAL SERVICES ADMINISTRATION

The DSMA will be the single Department of Defense contact point for coordinating standardization, specification and packaging matters with the General Services Administration so as to avoid unnecessary duplication.

VI. FUNDS AND PERSONNEL

The military departments will allocate such funds and personnel as required for the accomplishment of the Department of Defense standardization program within the schedules established by DSMA.

VII. CANCELLATION

This directive cancels Secretary of Defense memorandum of April 25, 1951, subject: The Munitions Board Standardization Program.

VIII. IMPLEMENTING DIRECTIVES

In accordance with Department of Defense Directive 4000.8, November 17, 1952, the Secretaries of the military departments shall take the action indicated in section IV, paragraph B, to implement this directive and shall, if necessary, revise regulations, procedures, and instructions and submit all such revised regulations, procedures, and instructions in duplicate to the Director, Defense Supply Management Agency for approval within 60 days after the date of this directive. Subsequent revisions shall be submitted to the Director, DSMA, for approval before issuance.

J. W. FOWLER,
Director, Defense Supply Management Agency.

EXHIBIT P

STANDARDIZATION SURVEY OF AIRCRAFT FUEL BOOSTER PUMPS BY GENERAL ACCOUNTING OFFICE AND AIR FORCE

Report on review of standardization controls relating to aircraft fuel booster pumps in the Department of the Air Force, by the Comptroller General of the United States

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, February 5, 1957.

The honorable the SECRETARY OF THE AIR FORCE.

DEAR MR. SECRETARY: Herewith is a copy of our report on a limited review of Air Force controls relating to the standardization of components of aircraft in production. The fuel booster pump was chosen as a representative item for study. Air Force records as of June 1956 indicate that over 350,000 of these pumps were installed in aircraft, available as spare parts, or on order at an aggregate value of more than $87 million, averaging $245 a pump.

This report points out that, under the military weapons system concept adopted by the Air Force in November 1953, no wide-scale effort has been made to control the types of components used by aircraft contractors except to require that the

components meet stipulated performance and capacity tests. This lack of control has contributed to the rapid increase in the number of types of fuel booster pumps manufactured which in turn has resulted in significantly higher production costs, additional engineering man-hours, and increased supply and maintenance costs.

In view of the need for development of new and improved aircraft, complete standardization of fuel booster pumps is neither possible nor desirable. However, industry representatives have indicated that limited standardization can be effected without interference with design improvement. It is estimated that savings of millions of dollars annually would result from such standardization of fuel booster pumps and that additional substantial savings could be effected in connection with many other components and accessories.

On September 12, 1956, we presented this matter with recommendations to the Deputy for Procurement and Production, Office of the Assistant Secretary of the Air Force (Materiel). We have been advised that an interdepartmental project on fuel booster pumps has been approved by the Department of Defense, with the Air Force designated as its executive agent, and that Air Force and Navy organizations are developing plans and data for this project and have set a target date of February 1, 1957, for completion of the initial study.

In addition, the Vice Chief of Staff promptly directed the Air Materiel Command and the Air Research and Development Command to consider methods of resolving the problems, such as organizing a management group to appraise requirements for new designs of components, encouraging closer relationships with industry, assuring that design information of components is categorized and made available to weapon system manufacturers, and implementing standardization to the degree feasible. Subsequently industry associations were alerted to this matter and requested to cooperate in developing more effective controls.

We wish to express our appreciation for the prompt action taken to initiate projects to correct the problems discussed in the report. We believe that further expansion of efforts to accelerate the standardization program will result in significant savings not only through lower prices of components but also through reduction of stock levels and requirements, decreased warehousing expense, and improved management. Advice as to the progress of these standardization projects will be appreciated.

A copy of this report is being sent today to the Director, Bureau of the Budget, the Secretary of Defense, and the Secretary of the Navy.

Sincerely yours,

JOSEPH CAMPBELL,
Comptroller General of the United States.

In connection with an audit of procurement practices of the military departments, including contract administration, the General Accounting Office has made a limited review of Air Force controls relating to the standardization of components of aircraft in production. The fuel booster pump was chosen as a representative item for study. Air Force records as of June 1956 indicate that over 350,000 of these pumps were installed in aircraft, available as spare parts, or on order at an aggregate value of more than $87 million, averaging $245 a pump.

This review was made pursuant to the Budget and Accounting Act, 1921 (31 U. S. C. 53), the Accounting and Auditing Act of 1950 (31 U. S. C. 67), and the Armed Services Procurement Act of 1947, as amended (41 U. S. C. 153 (c)).

Findings and conclusions

The Defense Cataloging and Standardization Act approved July 1, 1952 (5 U. S. C. 173), requires achievement of "the highest practicable degree possible in the standardization of items used throughout the Department of Defense, through the development and use of single specifications, in the elimination of overlapping and duplicating items specifications, and in the reduction of the number of sizes, kinds, or types of generally similar items."

Although we have not evaluated the progress attained by the Department of Defense in accomplishing the objectives of this legislation, our review of fuel booster pump procurement disclosed that, under the military weapons system concept adopted by the Air Force in November 1953, no wide-scale effort has been made to control the types of components used by aircraft contractors except to require that the components meet stipulated performance and capacity tests. This lack of control has contributed to the rapid increase in the number of types of fuel booster pumps manufactured which in turn has resulted in significantly

higher production costs, additional engineering manpower requirements, and increased supply and maintenance costs.

It is recognized that, in view of the need for development of new and improved aircraft, complete standardization of fuel booster pumps is neither possible nor desirable. However, representatives of fuel booster pump manufacturers as well as airframe manufacturers have informed us that limited standardization can be effected through dissemination of information as to the types of fuel booster pumps under development or production. Such information could be compiled by a research organization through coordination with the Society of Automotive Engineers or other professional organizations. It is estimated that savings of millions of dollars annually would result from such standardization of fuel booster pumps and that similar savings could be effected in connection with many other components and accessories.

Recommendation

On September 12, 1956, we presented a draft report to the Deputy for Procurement and Production, Office of the Assistant Secretary of the Air Force (Materiel), recommending that the Air Force confer with the Aircraft Industries Association and the Society of Automotive Engineers, aviation division, with a view toward undertaking a program for standardization of fuel booster pumps to the degree considered practicable. We recommended also that the Air Force conduct surveys of other aircraft components and accessories to attain standardization of such items insofar as practicable.

Summary of action taken

The Deputy for Procurement and Production promptly arranged for conferences to consider the problems presented in the report, and in reply of October 24, 1956 (see appendix A), he advised that the Vice Chief of Staff had sent a letter to the Commander, Air Materiel Command, and the Commander, Air Research and Development Command, pointing out the necessity for action to resolve these problems not only with respect to fuel booster pumps but also other aircraft components (see appendix B). Also, on November 5, 1956, a letter was sent to the Aircraft Industries Association of America, Inc. (see appendix C), requesting its assistance in evaluating the problems and effecting better controls over equipment standardization. Similar letters were sent to the National Security Industrial Association and the Society of Automotive Engineers.

The Deputy for Procurement and Production also stated that an interdepartmental standardization project on fuel booster pumps had been initiated and that study project No. 610–46 had been established by the Department of Defense, with the Air Force designated as its executive agent, to develop an effective plan to accomplish maximum feasible standardization. A target date of February 1, 1957, has been established for completion of the initial study, it being recognized that the formal standardization project will require considerable time and effort before the ultimate objective is achieved.

Scope of survey

During the site audit in and near Cleveland, Ohio, of various companies supplying the Government with aircraft parts, components, and accessories, we observed that there was an almost complete lack of standardization in demand for and production of such equipment, with resultant losses in design time and production costs, and increases in subsequent supply and service expense. Furthermore, in the absence of control by the armed services or coordinated action by and between the contractors, it was evident that this condition would be aggravated.

A survey was accordingly initiated to determine (1) the extent to which the possibilities of standardization are ignored in Air Force procurement policies, (2) the general effect of such policies on original procurement and on supply and maintenance costs, and (3) in the event remedial action appears desirable, the most effective means of establishing and maintaining a practicable level and control of standardization.

The fuel booster pump was chosen as a representative item for study. These pumps are installed in fuel tanks in the aircraft wings or fuselage and are used to boost the flow of fuel from the tanks to the engines and maintain constant pressure throughout the lines. Two to twenty-four fuel booster pumps are used on each aircraft. According to Air Force records as of June 1956 there are 507 different fuel booster pump models. Three hundred and fifty-eight thousand and nine of these pumps are reported as worldwide assets, including 145,788 installed

in aircraft, 181,660 in stock and 30,561 on order. The aggregate value of these pumps exceeds $87 million and averages $245 a pump.

Thompson Products, Inc., and Borg-Warner Corp., Pesco Products division, both located near Cleveland, Ohio, were selected as representative of the 6 or 7 major suppliers of fuel booster pumps. We interviewed their supervisory engineers and examined their production records to determine the present effect of lack of standardization and whether and to what extent standardization might be effected in the fuel booster pump and its accessories.

Subsequently, visits were made to a representative number of airframe manufacturers in Ohio and California to determine whether the information obtained and conclusions reached from our studies made at the accessory manufacturers' plants were valid and, inasmuch as the airframe manufacturers are design agents under the weapons system concept, to determine whether in their opinion a reasonable degree of standardization on this and comparable items could be achieved. Conferences were also held with representatives of Headquarters, Air Materiel Command, and Oklahoma City Air Materiel Area, to secure Air Force views on the subject.

History of fuel booster pump specifications

Fuel booster pump development began in 1943 with Thompson Products, Inc. (hereinafter referred to as Thompson), as a principal pioneer in the field. The first military specifications covering fuel booster pumps were issued in 1945 and continued to be issued until January 18, 1950. Although subsequent improvements and alterations have been numerous, no military specifications have been issued since the latter date.

During 1950, 1951, 1952, and part of 1953, all new basic models which were developed were either modifications of former military specifications or models for which performances and capacities had increased and for which no specifications were available. In such cases, airframe manufacturers wrote their own specifications to supplement or supplant the former military specifications.

On November 12, 1953, the Department of the Air Force issued Regulation 70–9, Military weapons system and supporting system procurement, which, in essence, established the policy of accomplishing weapon system development and procurement through transfer of the design prerogative to weapon system contractors, in this case the airfield manufacturers. Although one of the stated objectives of this system was to see that Government-recognized standards were used to the maximum practicable extent, this objective was not fully achieved. The new policy allowed each airframe manufacturer full control over all features of design. Since no control mechanism was provided by the services (other than approved product tests, which were concerned primarily with performance and capacities) and since there was no pressure toward voluntary control of standards through coordination between airframe manufacturers or manufacturers of booster pumps, new and modified models multiplied rapidly, and there were endless variations in fittings, wiring, etc.

Surveys at plants of Thompson Products, Inc., and Borg-Warner Corp., Pesco Products division—manufacturers of fuel booster pumps

Our surveys at the above subcontractors' plants confirmed that the number of models and modifications of fuel booster pumps under the weapons concept system had increased rapidly. The survey at Thompson disclosed, for example, that pump model TF–51200, originally made to military B–5 specifications, had expanded to 19 modified models, all still having the same performance and capacity ratings; model TF–31600, originally the B–25, also had developed into 19 models; the TF–55600, originally the B–22 military model, had grown into 7 basic models plus 8 modifications thereof.

As of April 10, 1956, Thompson was manufacturing 82 pump models, and, during the period since pump production began, there had been a cumulative total of 690 booster pump models and variations. Pertinent engineering costs had substantially increased along with the increase in number of models developed; the following figures show the changes in the engineering development department (covering fuel booster pumps only) since 1948, at which time production had been limited to models built to Air Force specifications:

Manpower:
1948: 7 employees (average)
1956: 36 employees (average)
Cost of operation:
1948: $93,000
1955: $820,000

This period covers the span of jet engine development, and it is likely that increased engineering cost could not have been avoided. However, it is believed that standardization would have lessened the extent of increase.

A similar study at Pesco Products division (hereinafter referred to as "Pesco") indicated that, at the time the airframe manufacturers were given full control over design, Pesco was producing 6 of the 25 basic models which were then covered by Air Force specifications. Since that time this number increased to 78 models produced under airframe manufacturers' requirements, and, as at Thompson, engineering costs substantially increased. As of January 1953 the ratio of engineering costs to sales was 3.75 percent, while in August 1955 the corresponding ratio was 11.3 percent.

It is of interest to note that Pesco's average sales price per unit increased from $141 in 1951 to $212 in 1955, an increase of 50 percent, although production and sales were substantially greater in 1955 than in 1951. Practically all the cost of this increase (about $700,000) has of course been borne by the Government. A major cause of greater unit costs in the face of increased total production has been the policy which has allowed airframe manufacturers to order specially designed pumps or pumps with special fittings or accessories, thereby increasing the number of models and modifications, boosting engineering design costs, and requiring numerous short production runs.

Review of model data, both independently and in conjunction with responsible engineers at both Thompson and Pesco, indicates that standardization of many of the fittings and appurtenances to the pumps is both practicable and highly desirable. Among the items which appear to be particularly susceptible to standardization are the following design features:

1. Use standard rather than special discharge fittings, so far as practicable. It also appears desirable that the fittings be made a part of the airframe rather than the pump; this change alone would reduce substantially the number of modified pump models and would also simplify and reduce costs of supply and repair functions.
2. Standardize lead wires, possibly by using terminal blocks.
3. Standardize inside diameters of pump mounting flanges.
4. Standardize fuel tank openings.
5. Set up standards of casting mount clearances, so as to not require new casting designs.
6. Standardize mounting locations of radio noise filters, either on the pumps or on the airframe.
7. Standardize motor vent plugs.
8. Standardize vapor discharge ports.
9. Change mounting flange to "O" ring design.

The above list is not intended to be all-inclusive, but is indicative of the range of items which, in the opinion of Pesco and Thompson engineers who are familiar with airframe manufacturers' requirements, are susceptible to a considerable degree of standardization.

During all of our discussions it was fully recognized (1) that, because of continuing aircraft improvement, new standards would to some extent continue to be evolved to take care of increased performance and capacity requirements, and (2) that there could never be more than a partial return to old standards. In the latter regard, possibly the most that could be accomplished would be practically a "freeze" on present products, with subsequent alterations or modifications thereafter subject to close control in the interests of standardization. In all discusisons, both here and in later conferences with airframe manufacturers and Air Force representatives, it was thoroughly understood and agreed that the proposed standardization program would stop short of any interference with capacity or performance in development of new or improved aircraft.

Representatives of both Thompson and Pesco expressed themselves as being strongly in favor of immediate and effective standardization of fuel booster pumps and fittings, as well as possibly other like products.

Conferences with airframe manufacturers, users of fuel booster pumps

During our surveys at Thompson and Pesco it was recognized that there was necessarily at least a limited degree of self-interest involved in the enthusiasm displayed by these subcontractors for a return to standardization. It was felt that visits to the plants of representative airframe manufacturers were desirable, to inquire whether standardization would (1) infringe on and hamper the airframe manufacturer's design prerogative and (2) place a straitjacket on improved design or on necessary increases in performance and capacity requirements.

Accordingly, visits were made to plants of the following contractors to discuss the information developed at Thompson and Pesco relative to the present absence of standardization in the fuel booster pump field, and the benefits which could be expected to accrue from a reasonable degree of standardization.

North American Aviation, Inc., Columbus, Ohio
Douglas Aircraft Co., Inc., Los Angeles, Calif.
Lockheed Aircraft Corp., Los Angeles, Calif.
Northrup Aircraft, Inc., Los Angeles, Calif.
North American Aviation, Inc., Los Angeles, Calif.

Representatives of North American Aviation, Inc., at Columbus, Ohio, were equally receptive to the principles of standardization of the pumps and their fittings, after assurance that our objective was standardization within the same performance and capacity ranges and would not in any way preclude necessary developments to meet advanced design performance requirements. Suggestion was made by a North American representative that probably the best qualified organization to handle a standardization program was the Society of Automotive Engineers, Aviation Division. This organization is composed of engineers employed by companies associated with the manufacture of aircraft and components or accessories, and the society has at one time or another done much work on standardization. We were informed that Mr. P. H. Jones, section head, powerplant engineering at the North American Aviation plant at Los Angeles, Calif., is chairman of the A–16 committee (fuel and oil systems and equipment) of the society.

Prior to conferring with Mr. Jones and with representatives of other airframe manufacturers, discussions were held with Mr. L. L. Aspelin, engineering manager, accessories division of Thompson Products, Inc., who is chairman of the A–16–A subcommittee under Mr. Jones. Mr. Aspelin was heartily in favor of the standardization program as presented and unofficially expressed the opinion that his subcommittee might undertake the control and guidance of the work. He believed, however, that the detail work incidental to such a program was considerably more than the subcommittee members as individuals could undertake and that the most effective and expeditious method of handling such a program might be by making the bulk of the work a project at a qualified engineering school or an engineering company, subject to the supervision and control of the subcommittee. Mr. Aspelin considered it much too big a project for complete handling on a part-time basis by the relatively few members of the subcommittee, all of whom are full-time employees of contractors or subcontractors. He also believed it impracticable to handle the program on a "lead contractor" basis, since he felt that there might be charges of favoritism and the competing contractors might be somewhat reluctant to put forth their best efforts along the desired lines.

Mr. P. H. Jones, both as representative of North American Aviation, Inc., and as chairman of the SAE committee, A–16, expressed interest in our proposed program and its objectives. It was his belief that such a program was long overdue and that to his knowledge the only item that had recently been seriously considered for standardization was the "O" ring. He remarked that if the fuel booster pump and its fittings and accessories were boldly approached as a unit and the project were given the necessary continued impetus, the standardization program could and would succeed. From the airframe manufacturer's viewpoint, he could see no possible points of opposition, provided the standardization did not extend beyond the margin of necessary freedom in improving performance or capacity.

Mr. Jones compiled the following tentative list of steps necessary for accomplishing the standardization program under the sponsorship of the Society of Automotive Engineers, aviation division:

"A. Some official body, such as the Department of Defense, should be apprised of the need for this program. This appraisal might state that based on the findings obtained during the review by the United States General Accounting Office, it appears desirable that studies be made in order to reduce to a minimum the variety of pump models utilized in future applications for specific performance ranges. This effort presumably would conserve engineering time, reduce costs, and improve supply problems.

It is considered that the best means of accomplishing this objective would be to make available to all airframe manufacturers and other interested agencies, information as to performance ranges of pumps under development as well as of current popular production models which might be considered for use in future applications.

The type of information to be made available would include flow rate, range, current consumption, weight range, physical characteristics such as flange configuration, outlet, fittings, and electrical configurations, manufacturer, etc. This information would not violate any proprietary considerations.

"B. If the official agency agrees to support the proposed action, a request should be forwarded to the Society of Automotive Engineers, 29 West 39th Street, New York 18, N. Y., asking for the cooperation of committee A–16, aircraft fuel and oil systems and equipment, in furthering the program. This request should state clearly the objectives and suggest the proposed plan of action.

"C. Upon receipt of this request, the chairman of A–16 would appoint a panel (with the committee's concurrence) whose task would be to establish in detail the type of information most useful to the airframe designer in determining whether a pump suitable to his particular application is already in production or under development.

"D. After the above list of information required is established and approved by A–16, * * * the Department of Defense would discuss the advisability of awarding an R. and D. type contract to some engineering college or company for the purpose of accumulating the required type of information from all recognized aircraft pump suppliers.

"E. After the orderly accumulation of this information, it would be published in some appropriate form for wide distribution to all companies and agencies who might find it useful in screening the availability of aircraft fuel pumps for particular applications.

"F. Obviously, such information is most useful if it is current, therefore further consideration must be given to the means of revising the published information on a 60-day or 90-day basis.

"G. It is anticipated that if the above program is given the support of the airframe manufacturers, through the sponsorship of some body such as committee A–16, the intent of the standardization program now being considered by the United States General Accounting Office will be achieved."

Subsequent to the conference with Mr. P. H. Jones, conferences were held with executive engineering officials of the aircraft companies listed above. On each of these visits the results were the same; after presentation of the proposed standardization program, with emphasis on the fact that there was no intention of infringing on the airframe manufacturers' design prerogative nor of invading the fields of performance or capacity, there was complete acceptance of the practicability desirability of the program. There was also complete agreement on the suggestion to entrust the direction of the program to the Society of Automotive Engineers, aviation division, as best and most impartially representing the interests of all concerned.

Conferences with Air Force officials at Headquarters, AMC, Dayton, Ohio, and OCAMA, Oklahoma City, Okla.

A visit was made to Headquarters, AMC, Wright Patterson Air Force Base, for discussion with the Chiefs of the Standardization Branch and the Standardization Control Branch concerning any standardization or related effort which had been accomplished under the authority and direction of Public Law 436, 82d Congress, approved July 1, 1952. This law provided for the cataloging and standardization of items procured by the Department of Defense, and was implemented by Department of Defense directive 4120.3, which established the Department of Defense cataloging and standardizing program, set up Federal supply classes for Air Force, Army, and Navy, and established the assignment of the classes to each service, and the services secondarily participating in the studies.

The fuel booster pump was in a class assigned to the Air Force for study and action; some study had resulted (see previous comment regarding standardization of the "O" ring) but, so far as our representative could ascertain, no action had resulted nor were any actual moves toward standardization contemplated for the foreseeable future. Most of the available manpower (which was admittedly very limited) appeared to have been devoted to the cataloging side of the directive.

We were assured by the Chief of the Standardization Control Branch that they were in full accord with our program and would welcome any assistance we could furnish to accomplish effective standardization. We were informed that the following associations, etc., were interested to some extent in standardization; any information on anything which had actually been accomplished along these lines was, however, not available.

	Organization
AIA	Aircraft Industries Association.
CMAS	Council for Military Aircraft Standards (an association of manufacturers).
SAE, AD	Society of Automotive Engineers, Aviation Division.
ASESA [1]	Armed Services Electrical Standards Association.
ASG [1]	Aircraft Standards Group.
JAN [1]	Joint Army and Navy.
AN [1]	Army and Navy Specification Section.
AIEE	Association of Industrial Electrical Electronics.
NAS	National Aircraft Standards.

[1] U. S. Government.

It was recognized by all present in the conference that it would be necessary to secure the active cooperation of the first two associations named above, and their members, to conduct a successful standardization program.

Subsequent to the conferences with airframe manufacturers previously discussed, our representative visited Oklahoma City Air Materiel Area, Tinker Air Force Base, Oklahoma City, Okla., the depot which has prime property class responsibility for fuel booster pumps, to obtain the view of responsible officials regarding the proposed standardization program and its effect on their procurement, inventory, and overhaul operations problems.

It was the consensus of opinion of those interviewed that the program was practicable and should be adopted and placed in full effect as expeditiously as possible. We were informed by responsible supply officials that the following list of potential benefits would result from adoption of the program:

1. Reduce stock levels.
2. Provide one end item for war reserve planning and stocking in lieu of the many different line items as a result of fitting, leads, etc.
3. Reduce and refine requirements for better requirements products throughout the system.
4. Reduce and standardize overhaul programs on many different line items to one line item.
5. Standardize materiel standards.
6. Provide better support with less assets.
7. Reduce technical data requirements.
8. Reduce management man-hours in controlling many interchangeable end items throughout the military system.

Other items susceptible to standardization

In the course of our discussions with industry representatives, we were informed that the following items and fields also are potential areas for standardization. This list was compiled without an extensive study and may not be all inclusive.

1. Fuel gaging systems.
2. Hydraulic systems.
3. Pneumatic systems.
4. Jet-engine accessories.
5. Instruments.
6. Electrical systems.
7. Wheels and tires.
8. Brakes and brake systems.
9. Radio communications (airborne).
10. Wire connectors.
11. Seals, gaskets, and "O" rings.
12. Valves.
13. Fasteners.
14. Tank refueling systems.
15. Fuels and lubricants.
16. Hoses.
17. Liquid oxygen converters.
18. Ground support equipment.
19. Ejection systems.
20. Cockpit assembly.

APPENDIXES

Appendix A

Department of the Air Force,
Office of the Assistant Secretary,
Washington, October 24, 1956.

Dear Mr. Rubin: I refer to the recent discussion in my office concerning standardization of fuel booster pumps.

I am attaching a copy of the letter which General White, Vice Chief of Staff, sent to the commander, Air Materiel Command, and the commander, Air Research and Development Command in connection with this problem. I also wanted you to know that both General Irvine, Deputy Chief of Staff, Materiel, and General Putt, Deputy Chief of Staff, Development, have enthusiastically endorsed this approach to the fuel booster pump problem as an immediate first step. I am sure they will maintain a close surveillance over the actions of both the Air Materiel Command and the Air Research and Development Command.

In the meantime, and along the lines we mentioned at our recent meeting, we have initiated an interdepartmental standardization project on fuel booster pumps. In this regard, a study project, No. 610–46, has been established by the Department of Defense with the Air Force designated as its executive agent to develop an effective plan to accomplish maximum standardization as may be feasible on this item. This plan will include also the review of existing types, models, and series of fuel booster pumps to determine those items which should be eliminated from the supply system. The latter procedure is known as simplification and is considered a necessary part of any standardization study.

The Air Materiel Command is presently in the process of establishing a working group to prepare the initial study. Meanwhile, the laboratories at Wright Air Development Center and the Navy Bureau of Aeronautics are collecting and analyzing technical and logistical data preparatory to their formal participation in the efforts of the working group. We have established a target date of February 1, 1957, for completion of the initial study.

I shall keep you advised of our progress in this matter. I am sure you recognize, as I do, that the formal standardization project will require the expenditure of considerable time and effort before our ultimate objective is achieved. Needless to say, we appreciate very much the cooperative attitude evidenced by Mr. Stokes and yourself in this matter.

Sincerely yours,

Max Golden,
Deputy for Procurement and Production.

Appendix B

Department of the Air Force,
Office of the Chief of Staff,
Washington, D. C., October 24, 1956.

Subject: Standardization of aircraft and missile components.
To: Commander, Air Materiel Command, Wright-Patterson Air Force Base, Ohio.
Commander, Air Research and Development Command, Baltimore, Md.

1. During the past year, the General Accounting Office conducted a survey on Air Force controls relating to the standardization of aircraft components. A sample illustration of this survey covered the inadequacy of control over fuel-booster pump production. The burden now has been placed on the Air Force to review this problem and take positive action to correct the deficiencies which have been made apparent.

2. The survey in question was initiated to determine:

(*a*) The extent to which the possibilities of standardization are ignored in Air Force procurement policies.

(*b*) The general effect of such policies on original procurement and on supply and maintenance costs.

(*c*) The most effective means of establishing and maintaining a practicable level and control of standardization.

3. It has been concluded by the General Accounting Office that because of inadequate control of components used by aircraft manufacturers the following have resulted:

(*a*) Losses in design time;

(*b*) Added engineering man-hours;

(*c*) Higher production costs;
(*d*) Increased supply and maintenance costs;
(*e*) Creation of monopolies.

4. It is alleged that both component and airframe manufacturers are very much in favor of standardization as long as there is no interference with design prerogatives.

5. Now the Air Force is faced with the requirement for action to resolve those problems involving standardization, the controls thereof, and the methods to enforce these controls. These suggestions may fit the pattern of thinking as to how best to approach the problem.

(*a*) First, it seems that, without jeopardizing the weapon system concept where we place primary discretion and responsibility on the airframe contractor, we should take a closer look at such items as fuel pumps, hydraulic pumps, actuators, etc. Such an appraisal of requirements for new design may require a management group such as the WSPO organization where both engineers and production specialists meet.

(*b*) Second, for future planning, we can encourage closer relationships with industry. This could result in a better understanding of future requirements and of those standards to which we can adhere in the development of new items.

(*c*) Third, through appropriate industrial groups, and with military representation, it may be desirable to assure that design information of aircraft and missile components is cataloged and made available to weapon system manufacturers.

(*d*) Fourth, standardization actions must continue with particular emphasis as to the degree in which standardization is feasible.

6. This problem is shared jointly by both your commands. A copy of the GAO draft is attached for your information. Meanwhile, separate correspondence is being sent to the Aircraft Industries Association (AIA) and the National Security Industrial Association (NSIA) asking them to treat this matter as a special subject through their appropriate panels.

THOMAS D. WHITE,
General, United States Air Force, Vice Chief of Staff.

APPENDIX C

NOVEMBER 5, 1956.

AIRCRAFT INDUSTRIES ASSOCIATION OF AMERICA, INC.,
Washington, D. C.
(Attention: Adm. DeWitt C. Ramsey, president.)

GENTLEMEN: The Air Force presently is reviewing its policies relating to the standardization of aircraft and missile components. A recent survey indicates that possibly too many variations of basic designs have been developed and are in production to satisfy the requirements of weapon system contractors. An example cited is fuel booster pumps where one manufacturer stated that he has developed and produced 690 models and variations. Moreover, a great many of these are variations of one basic model.

It is obvious that our position eventually could become one of imbalance, both logistically and economically. Therefore, it is necessary that proper controls be exercised to the limit of performance compatibility.

The components referred to are nearly always contractor-furnished, at least in the initial development and production phase. As a result, it is believed that your organization could be of considerable assistance to the Air Force, both in evaluating the extent of the problem and also in effecting more effective controls. The commanders of Air Materiel Command and Air Research and Development Command have been notified of this correspondence and they will contact you in the near future to acquaint you with the details.

Sincerely,

MARK E. BRADLEY, Jr.,
Major General, USAF,
Assistant Deputy Chief of Staff, Materiel.

DEPARTMENT OF THE AIR FORCE,
OFFICE OF THE SECRETARY,
Washington, May 1, 1957.

DEAR MR. COMPTROLLER GENERAL: Our letter of February 25, 1957, promised to forward to your office the results of the Air Force's study on the feasibility of

standardization of fuel booster pumps. Inclosure 1 is a copy of the report which was promised.

You will note that this study was expanded to include discussion of standardization of contractor furnished aircraft and missile components since fuel booster pumps represent but one of many similar components bought by the Air Force as contractor furnished equipment (CFE) on weapon system contracts. For this reason, it was considered desirable not to attempt to limit the study to standardization of fuel booster pumps alone but rather to study the general problem relating to all CFE components to determine whether improvement was possible and desirable, and if so, the most reasonable course of action which should be taken in seeking a solution to the problem.

Early in the study it was generally agreed that some improvement could be obtained for certain items, such as fuel booster pumps, classified as category I components in Air Force Regulation 70–9: Weapon System and Supporting System Procurement. A copy of this regulation is attached as inclosure 2. Major conclusions reached as the result of the standardization study include the following: Standardization is only one of many factors that must be considered and appropriately weighed if the Air Force is to obtain the optimum weapon system. Rapid progress in the development of a wide variety of different weapon systems makes standardization of components increasingly difficult. Ways and means must be found to speed the creation of standards if improvement is to be made in the standardization of aircraft and missile components. Responsibility for standardization rests with the Air Force and such responsibility cannot be delegated to the prime weapon system contractor. Finally, increased participation and assistance in standardization of aircraft and missile components should be sought on a continuing basis from industry, the professional societies and industry associations.

In line with these conclusions two conferences have been held at the Wright Air Development Center to discuss the problem of standardization. Representatives of industry, the technical societies, industry associations, equipment manufacturers, Navy and Air Force attended these meetings. The first conference was held February 26, 1957. Minutes of this conference are attached as a part of tab D, inclosure 1. The second conference was held on April 18, 1957. Minutes of this conference were not available in time for inclusion as a part of the attached study; however, conclusions reached closely paralleled those obtained at the earlier conference. At this conference it was proposed and agreed that the Air Force should request the Aircraft Industries Association to set up a special group to study further the overall problem of standardization. The study group is to have as its objectives the formulation of ways and means to accomplish standardization and the determination as to the extent to which industry can and should go in this effort. Inclosure 3 lists the conferees attending the April 18, 1957, conference.

Inclosure 4 presents a tentative brochure which has been drafted and which is now ready for coordination. This brochure depicts the objectives, purposes and techniques involved in the Air Force standardization program. After coordination the brochure will be printed and widely distributed within the Air Force and industry in an endeavor to educate further all persons and organizations involved in the program. Action has also been initiated to include additional design-interchangeability criteria in the Handbook for Aircraft Designers.

In addition to the standardization study conducted by the Wright Air Development Center the Air Materiel Command has completed its simplification study on fuel booster pumps. In the course of this study, the removal of the fuel pump fittings of various configurations permitted the storage of the basic fuel booster pumps under fewer identifications. Overhaul technical orders numbered 6R5–2–17–3, 6J10–3–27–501, 6J10–3–17–501, 6J10–3–10–501, and 6J10–3–6–501 were revised to indicate modification of pumps to the latest configuration during overhaul whenever the latest pumps would be used interchangeably with previous configuration pumps. Disposal action was taken where it was determined the pumps were no longer required to support Air Force equipment. This simplification effort resulted in the reduction of 251 fuel booster pumps out of a total of 431 active configurations which were in the Air Force supply system at the time of your report.

Although by these actions the Air Force believes that much has been accomplished, we do not wish to convey the impression that we are fully satisfied with the situation that presently exists. We believe that room for improvement still remains. However, as recognized by those in attendance at the February 26 and April 18, 1957, conferences at Wright Air Development Center, an active

standardization program must be maintained by the Air Force for a long continuous period if the maximum degree of standardization possible and desirable is to be attained in contractor furnished equipment under the weapon system concept of procurement. Current estimates indicate a minimum of 5 years will be required before significant results can be obtained from such a program.

You may be assured that this office will continue to maintain an active interest in the standardization program and, again, I wish to express my appreciation for your interest and help in bringing this matter to my attention.

Sincerely yours,

DUDLEY C. SHARP, *Assistant Secretary of the Air Force.*

Hon. JOSEPH CAMPBELL,
Comptroller General of the United States.

ENCLOSURE 1

OASD PROJECT NO. 610-46—FSC 2915—STANDARDIZATION OF FUEL BOOSTER PUMPS

PURPOSE

1. The purpose of this study project is to comply with the Office of the Assistant Secretary of Defense's letter dated October 17, 1956, subject: Fuel Booster Pumps—Standardization Study—Initiation of, and further described by teletype from Headquarters USAF to MCSI, attention Mr. Connelly dated October 20, 1956, as follows:

"Reference meeting October 1, 1956, with Mr. Golden relative to standardization of fuel booster pumps. Request study project be immediately established to determine degree of standardization feasible in the fuel booster pump area. Requirements for expeditious action to establish and complete this project concurred in by Headquarters, ARDC. Headquarters, ARDC is alerting ASG to priority of pending project and of requirements for full support of this standardization action."

FACTUAL DATA

1. Appendix I contains a description and listing of material supplied by agencies within the Air Force, the Bureau of Aeronautics and the Army upon which the findings of this study are based.

2. Tab B of appendix I includes a copy of a letter dated October 24, 1956, subject: Standardization of Aircraft and Missile Components, addressed to AMC and ARDC jointly. This letter requests a review of the Air Force's activity on standardization of aircraft and missile components. The 1st Ind. from Headquarters, WADC to Commander, ARDC, dated December 5, 1956, transmits the WADC comments on the general subject of standardization of aircraft and missile components to include fuel booster pumps. Enclosure 2 to this 1st Ind. is a chronological history of the WADC management of the development of fuel booster pumps from 1939 to the present time. This enclosure shows that continued effort was made to standardize fuel booster pumps and the limitations which have resulted in an increasing number of fuel booster pumps entering the inventory.

3. A survey of the existing supply system made by AMC indicated that the system held 431 different models of fuel booster pumps. These pumps entered the supply system over a protracted period of time as described by the chronological history above; 251 of these items have been changed from "active" to "reference" by consolidation, modification or breaking down into components. This results in a list of 180 active pumps replacing the previous 431. This action is referenced in tab E.

4. As result of the activity initiated by the correspondence included as tab B, a conference was held with the industrial technical societies and associations on February 26, 1957. A copy of the minutes of this meeting is included as tab D. This meeting was held to discuss with representatives of industry the possibility of increasing emphasis on the requirement already placed on industry through various specifications and handbooks that standard equipment be used whenever possible. A request was made through this group that industry establish procedures by which they attempt not only to use existing standards wherever practicable, but that they attempt to establish a procedure where they can group new requirements on a timely basis. The equipment industry can then develop new standards to meet new weapon systems requirements and eliminate the

necessity for a separate item for each separate application. Industry has generally agreed that there is possibility of improvement in this area and it was suggested that a conference with reprsentatives of airframe, engine, and accessory manufacturers be called to further discuss this subject. A conference has been called and will be held at Wright Field on April 18, 1957. A copy of the letter establishing this conference is attached also in tab D.

5. It is anticipated that changes will be required in the current general performance specifications to cooperate with industry in establishing the standardization gains and controls expected from the activity mentioned in the paragraph above.

6. It is not anticipated that a firm group of standard fuel booster pumps or any other item of equipment can ever be made which will meet all future weapon systems requirements. The performance of a weapon is dependent upon the performance of all of the components which make up that weapon. To provide the rapid rate of improvement in performance of weapons, which is required to insure superiority, it is necessary that all of the components be continuously changed and improved. This simple fact will always limit the degree of standardization possible.

CONCLUSIONS

1. It is concluded that complete standardization by means of detailed military specifications and drawings is not practicable and is not in the best interest of the Government.

2. It is concluded that there is a possibility of improvement in the use of standard components in weapon systems through an increased emphasis in this area by the Government, the weapon systems contractors, and the equipment industry. Action has been taken to explore the possibility of improvement in this area.

3. It is concluded that some revision will be necessary to Government specifications to cooperate with industry in achieving standardization action. (Reference tab J for proposed immediate action.)

APPENDIX I TO OASD PROJECT NO. 610–46—FSC 2915 STANDARDIZATION STUDY OF FUEL BOOSTER PUMPS

1. *Background*—This study has been prepared by direction of the Staff Director for Standardization, Office of the Assistant Secretary of Defense, Washington, D. C. (Ref Tab A—Let October 17, 1956), reference in Air Research and Development Command letter Standardization of Aircraft and Missile Components dated 31 October 1956, and Wright Air Development Center reply thereto 1st Ind dated 5 December 1956 (Ref Tab B—Exhibit 1), as a result of:

a. General Accounting Office "Report on Review of Air Force Controls Relating to the Standardization of Aircraft Fuel Booster Pumps" (Ref Tab C—Exhibit 1) referenced in Department of the Air Force, Office of the Chief of Staff, letter 24 October 1956 (Ref Tab B).

b. Direction by Disposition Form from Plans and Operations Office Directorate of Engineering Standards dated 16 November 1956 (Tab A).

2. *Statement of Facts*—

a. *Material*—This study is based upon an analyses of data supplied by:

(1) Air Material Command—with regard to present stocks in Air Force supply system. (Tab E—1st Ind dated 6 Mar 57 which is a reply to Disposition Form dated 8 Feb 57 from Power Plant Laboratory, Wright Air Development Center) in connection with supposal dated 16 Jan 1957 (attachment to Disposition Form dated 8 February 1957).

(2) Air Material Command—with regard to future standardization. (Tab E—1st Ind dated 6 Mar 57 which is a reply to Disposition Form dated 8 Feb 57 from Power Plant Laboratory, Wright Air Development Center) in connection with supposal dated 4 January 1957 (attachment to Disposition Form dated 8 Feb 57).

(3) Detachment #1 Air Research and Development Command—Directorate of Systems Management—with regard to future standardization. (Tab F— 1st Ind dated 5 Mar 57 which is a reply to Disposition Form dated 8 Feb 57 from Power Plant Laboratory, Wright Air Development Center) in connection with supposal dated 4 January 1957 (attachment to Disposition Form dated 8 Feb 57).

(4) Bureau of Aeronautics—with regard to present stocks in supply system and future standardization. (TAB G—Basic letter Aer–PP–320/6 dated 18 March 1957, and Inclosure (1) thereto).

(5) Bureau of Aeronautics—with regard to future standardization. (Tab H—Basic letter Aer–PP–320/10 dated 27 March 1957).

(6) Army Transportation Research and Engineering Command—with regard to present stocks in supply system and future standardization—(Tab I—Telegram dated 28 March 1957).

(7) Power Plant Laboratory—Wright Air Development Center—with regard to Laboratory position relative to existing procedures and future standardization. (Tab J—Laboratory position dated 28 March 1957).

b. *Meetings*—Prior to initiation of above referenced correspondence, meetings (12–15) were held for discussion purposes with representatives of various segments of Wright Air Development Center, Directorate of Systems Management of Detachment #1 Air Research and Development Command, Air Material Command, Bureau of Aeronautics and Army Transportation Research and Engineering Command in an effort to determine the actual conditions existing relative to present stocking of Fuel Booster Pumps, and for obtaining factual data with regard to the feasibility of standardization for the future.

TAB A

DISPOSITION FORM

STUDY PROJECT No. 610–46—FUEL BOOSTER PUMPS

To: WCLPO From: WCXO Date: 16 Nov 56 Comment No. 1
Mr. Toll/mjm
30201/B11A/R164

1. Subject OASD project is herewith forwarded for action as necessary Attention is invited to due date of February 1957.

2. The project was initiated at the request of Hq USAF, AFDDS–1 (Incl 1). AMC has indicated that it will support the project by submission of necesary data or by joint working group as required.

A. G. ADMAN
Chief, Plans & Operations
Directorate of Engineering Standards.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
Washington 25, D. C.

Oct 17 1956

Supply and Logistics
SS–3
FSC 2915
Proj. No. 610–46

To: Commander, Air Materiel Command, Attn: Cataloguing and Standardization Division, MCSI, DepSO, Wright-Patterson Air Force Base, Ohio

Subj: Fuel Booster Pumps—Standardization Study—Initiation of

Ref: (a) TWX fr HQ AMC WPAFB Ohio to SD, OASD (S&L) dtd 9 Oct 56

1. A project for the subject Standardization Study is hereby initiated.

CUSTODIANS	PREPARING ACTIVITY
Army—Transportation Corps	Air Force
Navy—Bureau of Aeronautics	
AF—Air Force	

2. February 1957 has been established as the time limit for completion and submittal to the Standardization Division, OASD (S&L) for approval.

3. Additional details may be obtained from the Electronic and Aircraft Branch, Standardization Division, LIberty 5–6700, extension 66407.

J. J. DUNN,
Staff Director for Standardization

WPW 2Ø
HQA ØØ3
MM RJEDWP
DE RJEPHQ 1ØØ3
M Ø42Ø49Z
FM HEDUSAF WASH DC
TO RJEDWP/COMAMC, ATTN: MR. CONNOLLY, MCSI, DEPSO, WPAFB
BT
UNCLAS FROM AFDDS-1 EUETR

REFERENCE MEETING 1 OCT 56 WITH MR. GOLDEN RELATIVE TO STANDARDIZATION OF FUEL BOOSTER PUMPS. REQUEST STUDY PROJECT BE IMMEDIATELY ESTABLISHED TO DETERMINE DEGREE OF STANDARDIZATION FEASIBLE IN THE FUEL BOOSTER PUMP AREA. REQUIREMENT FOR EXPEDITIOUS ACTION TO ESTABLISH AND COMPLETE THIS PROJECT CONCURRED IN BY HQ ARDC. HQ ARDC IS ALERTING ASG TO PRIORITY OF PENDING PROJECT AND OF REQUIREMENT FOR FULL SUPPORT OF THIS STANDARDIZATION ACTION.
BT
Ø4/2Ø49Z OCT RJEPHQ

TAB B

Basic ltr Hq ARDC (RDTES) dated 23Nov56 to Comdr WADC, Subject: "Standardization of Aircraft and Missile Components"
WCO 1st Ind

Col Barnes/mrm/21193
5 DEC 1956

HQ WRIGHT AIR DEVELOPMENT CENTER, Wright-Patterson AFB, Ohio,
TO: Commander, Air Research and Development Command, Attn: RDTES, Post Office Box 1395, Baltimore 3, Maryland

1. This endorsement replies both to the basic letter and to a similar letter, same subject, dated 31 October 1956.

2. Though the General Accounting Office study is concerned only with fuel booster pumps, the problem it presents is general. Booster pumps, as Category I items under AFR 70-9, are but one of many similar components bought by the Air Force as contractor furnished equipment (CFE) on weapons systems contracts. It therefore does not appear that the limited problem which the GAO presents can be wisely acted upon as an isolated and single problem.

3. If directed to do so, however, ARDC obviously can withdraw manpower from other programs and emphasize fuel booster pump standardization. There are strong indications, however, that such an effort, oriented primarily to satisfy a single immediate pressure, would embark us upon numerous additional and similar programs in the near future. Such programs, pointed toward goals which may be unrealistic, and undertaken without consideration of the entire problem, may well produce insignificant results for a large expenditure of time and manpower.

4. It seems more appropriate to examine the general problem itself, to determine the most reasonable general course of action, and then to undertake detailed remedies within the fuel booster pump area in consonance with that course of action.

5. We have therefore re-examined the problem of standardization of Category I components. Inclosure 1 summarizes the study. In essence, the study shows that the problem is not the result of the weapons systems concept. Rather, it is the result of the same fundamental forces and pressures which required the adoption of the weapons systems concept. A system to standardize Category I items does exist, but it is in conflict with the complexity of modern weapons systems, the interdependence of system components, the number of systems under development, and the pressing need to reduce the length of the weapon system development cycle.

6. A review of the history of attempts to control fuel booster standardization shows that the general factors noted above are applicable to the case in hand. The review is summarized in Inclosure 2.

7. Before presenting specific recommendations, as requested in the basic letters, we are impelled to examine more closely several of the critical considerations involved.

a. Standardization of components in and between weapons systems must be accomplished early in system design. If standard components are not available and applied at this early point, little can be gained thereafter. Intensive standardization therefore requires the anticipation and creation of on-the-shelf standards to meet any and all demands from systems entering the design phase.

b. Historical data are often presented to prove that Category I standards can be anticipated and created. It is not hard to look backward, to assemble an accumulation of requirements for similar hardware, and to show that these requirements could have been satisfied by a few standard devices. It is then concluded that such components are worthy of intensive standardization. This view neglects the essential point that the requirements arose in sequence, over a period of years, and that each had to be satisfied as it arose. In addition, two assumptions underlie the historical approach to standardization:

(1) That the USAF can forecast, with accuracy, the detailed Category I component needs of future weapons systems, and can then create on-the-shelf standards to meet these needs.

(2) That the resources to create, and to enforce the use of on-the-shelf category I standards are available or can be obtained.

c. The two assumptions above were those on which the Air Force operated prior to the adoption of the weapons systems concept. Precisely and simply because these views were proved in error, the Air Force was forced to adopt the weapons systems concept. Between 1939 and 1954, the USAF attempted to control fuel booster pumps on the basis of the same assumptions. Note Inclosure 2. The effort was unsuccessful.

d. Category I components are found in that category fundamentally because they are least susceptible to standardization. With the exception of the simplest, non-operating components (nuts, bolts, fasteners, etc), Category I components generally are intimately linked to the peculiar performance, environment, and configuration of a specific weapon system. If we assume that Category I components are generally susceptible to intensive standardization, we must also conclude that the weapon system concept itself is generally in error.

8. The GAO study is oversimplified. Any aspect of weapon system development, examined in a vacuum, will reveal great benefits if it can be emphasized. Performance increases if cost is no consideration. Cost decreases if safety is no consideration. Standardization, which seems to have a somewhat holy connotation, is no more and no less important than the many other complex trade-off factors involved in weapon system development.

9. Many of the factors which affect and compromise standardization are listed in Inclosure 1, and will not be repeated here. Because the solution to the problem posed by the GAO is essentially a complex compromise, it cannot be reached quickly or easily. Each of the factors in Inclosure 1 must be reviewed and weighed as it applies to fuel booster pumps. Our initial review indicates that some improvement may be obtained. It would be highly premature, however, to totally reject the solution proposed by the GAO, or to immediately embark upon a costly program along these same lines.

10. OASD project 610–46 provides the vehicle by which the required study can be accomplished, with the cooperation of RDZS, AMC, AIA, ASIA, SAE, and similar agencies. We do not feel that a reasonable and maturely considered course of action can be outlined specifically for fuel booster pumps until this study has been completed. The study is under way.

11. As a general comment, we feel that increased participtation in the standardization program by industrial associations and engineering societies is essential, if we are to retain reasonable control over Category I components. The assistance of these groups and societies should be increasingly sought as standardization plans are prepared, under the DOD standardization program, for specific groups of components. This problem will, in addition, be discussed with the AIA during the forthcoming negotiations regarding the program for control of Contractor Developed Material (CDM).

12. It also appears that standardization within specific weapons systems can be improved. DADC will take action with RDZS and AMC, through the appropriate WSPOs, to emphasize the need for increased standardization within weapon systems.

13. RDZS and AMC (MCPR) have participated in the preparation of, and concur with, this letter.

FOR THE COMMANDER:

RICHARD W. BARNES
Colonel
DCS/Plans & Operations

SUMMARY OF STANDARDIZATION METHODS, TRENDS, AND RESPONSIBILITIES

1. The basic letter requests the development of a recommended ARDC course of action regarding the standardization of Category I aircraft and missile components.

2. The problem may be broken down into two fundamental questions.

a. What methods of standardization should be used?

b. What agencies can and should undertake standardization?

3. *What Methods of Standardization Should be Used?*

a. There are two possible methods of standardizing aircraft and missile components. The first involves the preparation of procurement data which governs all design details of an item. This "Chinese Copy" approach is used for certain classes of simple items procured by the Air Force, such as nuts, bolts, fasteners, electrical connectors, buckles, D-rings and many other items.

B. Because of industry practice and procurement regulations, however, this approach is not feasible for complex items. Items produced by one firm in a peculiar complex of machines, processes, facilities and personnel normally will not be produced as a "Chinese Copy" by another firm differently equipped, differently staffed, with different facilities and with varying processes. As an example of the difficulties in this area, consider the attempted standardization of the aircraft fastener. Though this item is extremely simple, the competitive pressures and interests of various firms, and the requirements for particular applications, have so far combined to prevent standardization.

c. The trend, therefore, has been to require and obtain standardization for complex items by confining our efforts to defining envelope size (form), mounting and connecting criteria (fit), and performance requirements (function). Form, fit, and function standardization can provide interchangeability regardless of maufacturer. It does not, however, necessarily reduce either the maintenance, procurement, or supply workload generated by a family of interchangeable items. It does result in an inventory of different items equal to the number of contractors producing the item multiplied by the number of different sizes or capacities standardized.

d. While both of the above methods of standardization are presently being used, depending upon the complexity of the item involved, the trend is consistently away from detail "Chinese Copy" standardization, except for simple items. As the complexity of our material increases, this trend will be accelerated.

4. *What Agencies Should Undertake Standardization?* There are only three basic agencies which can undertake standardization: the government, industry, and independent engineering or industrial associations. In the paragraphs that follow we will review the capability each possesses to undertake standardization, and the trends and pressures which affect these capabilities.

5. *The Present and Estimated Future Air Force Position.*

a. *The Effect of Complexity.*

Since the end of World War II, we have achieved greater performance in almost all technical areas only at the expense of greatly increased complexity. When complexity is doubled, the engineering required to insure operational compatibility is quadrupled. The increase in standardization and other technical workload increases algebraically, and not arithmetically, with complexity.

The relatively fixed manpower of this Center has therefore been thinly dispersed to cover tremendously increased numbers of technical problems. This trend, which is increasing in momentum, forces the delegation of authority over design detail to the contractors of the Air Force. There is little doubt that if we are directed to do so, we can achieve increased standardization in any single area. Under the conditions outlined above, however, this can only be done at the expense of withdrawing manpower resources from general management of other programs and focusing them on detailed standardization actions. Looking toward the future, we can anticipate that complexity and our problems with standardization will increase. The level of detail at which our seemingly fixed engineering manpower can profitably operate must continue to rise.

b. *The Standardization Cycle Versus the Obsolescence Cycle.*

The fundamental nature of standardization and the high obsolescence rate of Air Force equipment combine to produce an environment in which standardiza-

tion sometimes is of low payoff. To be effective, a standard must be widely agreed upon and widely applied. A limited standard is of limited utility. Yet the time required to obtain wide acceptance and use of a standard inevitably is long because it requires the agreement and active participation of many different agencies. The standardization process seems to be growing more lengthy because of the increase in complexity and the corresponding increase in engineering and logistic problems which must be resolved before decisions can be rendered.

On the other hand, the performance of weapons systems in the inventory today are orders of magnitude apart as compared to the minor performance differences which existed between systems in World War II. This leads to a very rapid obsolescence of systems and of equipment items. It has been our experience, for example, that we were able to obtain final standardization of some components used in an early K-System only a few months before the particular system itself was due to be phased out of the inventory.

It is clear that if standardization is to be of reasonable benefit to the government, the time required to standardize must be considerably reduced. The engineering decisions involved in standardization probably cannot be compressed. The cycle at present, however, includes many months of processing from agency to agency. It appears that some emphasis might well be placed on standardization in the organizations which are closest to the design and application of the components which we wish to standardize. Funneling all standardization actions into the present cumbersome military standardization machinery can result only in limited benefits. It appears that the time and manpower invested per item standardized in such an environment will continue to increase to a point at which the value of many such actions may be open to question.

c. Dispersion of Design Parameters vs On-The-Shelf Standards.

The standardization of components for wide application in a variety of different weapons systems is becoming increasingly difficult. The environments in which these systems operate are becoming more and more diverse. The environment which will surround Weapons System 125A, for example, will not be comparable to that of a fighter-bomber of the same time period. The heat environment of future supersonic bombardment aircraft cannot be compared in duration with that of future interceptor weapons systems. The advent of exotic fuels for certain weapons systems will create requirements differing widely from those of systems using conventional fuels. The difference in acoustic noise environment and effects on B–47 and B–57 aircraft strongly exemplifies a current major difference in environment. The dispersion of environments for missile weapons systems will be greater than that for manned weapons systems. This trend toward dispersion in environments complicates an already complex situation.

We expect that this trend will continue, and that "conventional" approaches to component problems will often not satisfy weapons systems requirements. As diverse weapons systems develop more and more peculiar subsystem and component requirements, state-of-the-art knowledge may often lag, unless we develop a capability to support technical development on an increasingly broad front. We will find that weapons systems contractors often must sponsor state-of-the-art programs to obtain satisfactory solutions to the problems which their systems create.

The factors noted above require that our standardization effort be increasingly designed for a quick response time. Standardization, to be effective in a period of rapid obsolescence and technical progress, requires creation of standards not later than the time when the first requirements for application become active. Standardization attempted after design, test and installation of items in different systems usually will be costly and ineffective.

It is always easy to look backward through time, and to point out that we have sequentially created a host of different items which perform very similar functions. Such a view is, however, unrealistic. At the time the first item was created for application to a weapon system, no similar item existed. Each time a new item is created, it usually differs from its predecessor in requirements. It is relatively easy to assemble all requirements at any point in time, and thus to show how easily all could have been satisfied by one or a few standardized devices. The requirements, however, were *not* coincident in time. This again re-enforces the point that standardization, to the most effective, must occur before the requirement for the standard item exists.

Fundamentally, therefore, we are asked to create on-the-shelf standards for all future weapon system needs. The request comes at a time when the complexity and diversity of weapons systems makes such anticipatory standardi-

zation more and more difficult, and at a time when our resources are already strained by the other aspects of system complexity.

d. *Control by System vs Control by Component.*

The factors we have outlined in paragraph 5a through 5c, above were among those which led to the adoption of the weapons systems concept. The weapons systems concept was modified by AFR 70–9. The modification required the USAF to retain control of certain components and subsystems to maintain a healthy and vigorous equipment industry, to provide reasonable competition in procurement, and to control those areas in which state-of-the-art programs prosecuted by the Air Force must be accomplished hand-in-hand with system developments. In those areas in which AFR 70–9 gives to system contractors great design latitude and authority, detailed standardization controls cannot be imposed by the Air Force without violating the weapons systems concept and resurrecting the situation the concept attempted to solve. In those areas in which AFR 70–9 indicates procurement by Categories III or IV, the present Air Force standardization system, primarily operating on a form, fit and function basis, has managed to achieve a reasonable degree of standardization.

The trend, however, is to delegate greater and greater responsibilities to system contractors and to associate contractors. We anticipate that future revisions of AFR 70–9 will reflect this trend.

The most difficult standardization problems fall into the areas covered by Category I in AFR 70–9. We are faced with two conflicting circumstances: first, the realization that Category I items are so intimately related to the weapon system that contractor control of them is essential; second, pressures to violate this control to obtain standarization.

e. *Extension of the Development Cycle.*

Control over Category I standardization by the Air Force requires the following:

1. *Item Description.*—After considerable engineering study, detailed specifications, performance specifications, drawings, standard sheets, handbook data, or some written documents must be prepared to describe an item. This data must be published, periodically reviewed, amended, and modified. The process requires time and manpower in industry and the USAF.

2. *Enforcement.* Enforcement requires first that a weapons systems or associate contractor submit to the Air Force all detailed data on his system. It further requires that this detailed data be reviewed in detail. It requires justification of all deviations from standard, and the approval, in detail, of all non-standard items. This process of second-guessing and delayed decision increases the length of the weapons systems development cycle. Further, it requires both the Air Force and its contractors to expend a tremendous quantity of engineering manhours in the preparation and review of the data involved.

3. Correspondence previously forwarded to Hq ARDC elaborated upon this problem at length. The proposed solution, a new method to handle approvals of Contractor Developed Materiel, received the general approval of Hq ARDC several months ago. Once this system is established, with the concurrence of AMC, we will shorten the development cycle, but we will also intensify the problem of standardization of Category I components.

f. *Standardization as a Single Consideration.*

Timely availability, superior performance, maximum utility, cost, manpower limitations, and many other factors make up the management considerations in the attempt to keep the USAF properly equipped. Standardization of items of equipment used in weapons systems must be viewed as a part of a continuing compromise, and should not be singled out as a separate subject. Standardization must be put into proper balance with other equally pressing considerations involved in obtaining technically superior weapons in the minimum time, and using limited personnel and funds.

The benefits of standardization ultimately are expressed in lower initial costs, lower logistic support costs, and in increased tactical readiness. We fundamentally save time, dollars and manpower. In any proposal to increase standardization, we must always weigh the cost of the improvement in time, dollars, and manpower expended to obtain standardization. We must also examine the time-phasing of our expected standardization effort. In a technical area in which obsolescence is rapid we may find that the time, cost and manpower to standardize is high, and that standardization cannot be implemented soon

enough to repay this investment. Though the surface economics of standardization may in such cases be obvious, a mature and considered exploration of the problem may often reveal the undesirability of an intensive standardization program.

g. *Component Standardization as a Single Consideration.*

In standardizing Category I items, we are primarily concerned with two classes of hardware: relatively complex items, which must be interchanged for maintenance, and relatively simple items, such as nuts, bolts, and fasteners. This paragraph will deal only with the first class of items. With such items there are four major standardization considerations:

1. *Component Standardization.*

2. *Attachment and Accommodation Standardization.* Even though by component standardization we obtain a single hydraulic pump, for example, the benefits may be largely lost if the pump must be equipped with different fittings, electrical connections, hydraulic connections, bleed lines, mounting adapters, etc. for different applications and environments in one or more weapon systems.

3. *Maintenance Concept Effects on Standardization.* At the present time, to simplify field maintenance, to reduce the level of training required for airmen, and to save time in tactical organizations, the USAF believes in supplying some items as built-up modules which can be immediately interchanged with the inoperative module on the weapon system. Under such a concept, a single standard pump may be stocked and issued in several hundred different configurations. The "module" concept improves both reliability and maintainability.

4. *Supply and Procurement Concept Effects on Standardization.* Under the maintenance concept above, a basic item in numerous different module configurations will be stock listed many times. It is also possible that spares will be procured for these separately stock listed items, and it is certain that separate stock control and storage must be provided for each different configuration.

Unless all the factors outlined above are in consonance with a component standardization effort, much of the effect and benefit of the component standardization program is lost. It seems obvious that valid maintenance and supply objectives are in conflict with valid standardization objectives. Standardization should not be emphasized to the exclusion of the other considerations above.

An effective program to achieve standardization of complex Category I items requires that ARDC and AMC collaborate in balancing the many factors which surround the problem. Component standarization programs which cannot be followed through to maintenance and supply standardization may well cost more than the benefits obtained.

6. *Standardization by Industry.*

Competitive pressures existing in any field filled by a number of vendors will tend to produce items of almost similar characteristics with minor differences tailored to customers' peculiar needs. One of the major suppliers of fuel booster pumps is known, for example, for his willingness to adapt any production pump to the desires of system contractors. This willingness to "serve" the customer is characteristic of the industrial environment, and does not lead to standardization.

In addition, no one vendor is sufficiently aware of all the requirements and developments which are underway at any particular point in time to take wise standardization action.

Legal problems also arise in attempts of firms to cooperate informally. Fear of accusations of conspiracy, price fixing, and other actions in restraint of trade damp any enthusiasm for such cooperation. We can conclude that expecting industry itself to standardize for any normal motive on Category I items is unrealistic.

7. *Engineering Groups and Industrial Associations.* We feel that these organizations can contribute. They represent a potential standardization capability which must be further used if the trends we have outlined in paragraph 5 are accepted as valid. There are a number of advantages to this approach.

a. Engineers in industry are closest to the detailed requirements for new or modified devices. In terms of widely applicable designs, the standardization problem comes to a focus in the equipment industry to a greater extent than it does in the airframe industry *per se*. A group of engineers from all firms manufacturing fuel booster pumps, or any other equipment item, will be closer to individual and specific problems early in the requirements and design stage than any other group.

b. If standardization action on Category I components is more heavily concentrated in independent industry and engineering associations, the reaction time, from need to standardized item, probably can be reduced to the minimum.

c. A considerable part of the time now needed to coordinate and review detailed technical data through the ponderous USAF–DOD machine can be eliminated, freeing many engineers for other purposes.

8. There are corollary disadvantages to this procedure. Competitive pressures will tend to prevent the adoption of standards which would otherwise be desirable. Aggressive sales organizations will continue to use the device of modification "service" to the customer to take business away from competitors.

a. As firms develop new models of equipment, to obtain competitive advantage, there will be great pressures to adopt these new items as standard. This will result in an increase in the number of standards over those functionally necessary.

b. Prime-vendor relationships involving mutual financial interests may allow the continuing favor of one or a few vendors by a specific system contractor. In such a relationship, the prime may well use peculiar requirements to enable him to procure from his favored vendor.

c. The power to create standards can be vested in an independent technical organization, but direct power to enforce these standards cannot be so vested. Lower costs and early delivery tend to create some automatic enforcement.

9. Many of the factors noted in this study which compromise intersystem standardization do not as strongly affect standardization within a specific weapons system. It appears that action should be taken through the various Weapon System Project Offices to require from system contractors added emphasis on intra-system standardization.

10. *Conclusions:*

a. That standardization is but one of many complex considerations which must be balanced in the development of Category I equipment.

b. That the factors examined in this study must be judiciously weighed as they apply to any particular family or group of Category I components before a reasonable and feasible course of standardization can be undertaken.

c. That increased participation in the standardization program by industrial associations and engineering societies is essential.

d. That the assistance of these groups and societies should be increasingly sought as standardization plans are prepared, under the DOD standardization program, for specific groups and families of components.

e. That ARDC and AMC should jointly take action with system contractors through the appropriate Weapon System Project Offices to emphasise the need for increased standardization within weapon systems.

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30 November 1956

FUEL BOOSTER PUMPS

WADC MANAGEMENT 1939—PRESENT

The technical management of Fuel Booster Pumps for the USAF has gone through three distinct phases since the first use of such pumps in 1939. Initially, very tight control of the pump design and quality was achieved. This control required time and manpower. The Post—World War II period of accelerated aircraft development, and the drastic performance changes of aircraft from one model to another did not permit time to do the job for each aircraft. A second approach to the technical management started around 1948 when a group of Standard pumps were made available to the industry in the hopes that industry could choose from this group. Experience showed that numerous deviations had to be granted and that considerable manpower was required. In 1954 a third procedure was adopted when a single general performance specification was written. This Specification controlled quality only, leaving the weapon system contractor responsible for insuring the timely development of pumps for his system.

The following summary outlines, the basic factors in each of the three periods mentioned above:

1939–1948 This period started with the first use of fuel booster pumps. During this initial period of use, rather tight control of pumps was effected by the following method:

1. A complete specification was written describing the fuel pump used on a specific airplane. The initial pumps made to this specification were purchased by the Government, and were furnished GFE for the experimental and service test aircraft.

2. Tests of these pumps were made by the contractor, and also by the Government, at the discretion of the Government.

3. Production aircraft were equipped with the same pumps, but were procured by the contractor (CFE).

4. During this period of time, two men were assigned to this task.

1948–1954 During this period of time, the accelerated pace of aircraft development prevented the CFE availability for the experimental and service test aircraft. As a result of this time factor, the following procedure was adopted:

1. One general specification (USAF 28209) was written, and a family of detail specifications was written. This family of specifications attempted to describe a family of pumps with enough variations in design to meet a maximum of application. Deviations to these specifications were given when sufficient reason was given by the contractors of weapon systems. Numerous deviations were requested. The main reasons for such deviations were performance to meet the aircraft performance, envelops to fit a particular spot, and variation in connection positions.

2. Tests of these pumps were made by the contractor, and also by the Government, at the discretion of the Government.

3. These pumps were all bought by the contractor. (CFE)

4. During this period of time, two men were assigned to this task.

1954–Present. Since 1954, no attempt has been made to enforce a set family of pumps. The experience of the past showed that little was being accomplished, as the following procedure was established:

1. A general performance specification MIL–P–5238A(ASG) was written. This specification set down the performance requirement desired of fuel booster pumps. It required the airplane or fuel booster pump manufacturer to write Model specifications in accordance with the outline specification MIL–P–8704 (ASG) which describe that which is used in each installation. Each pump is made to the requirements of the individual weapon system contractor.

2. Tests of these pumps are made by the contractor, and also by the Government, at the discretion of the Government.

3. These pumps are all bought by the contractor (CFE).

4. This program is being supervised by one man who is also handling pumps for water-alcohol, air to air refueling, combustion heater, and special fuels.

HEADQUARTERS, AIR RESEARCH AND DEVELOPMENT COMMAND

Post Office Box 1395

Baltimore 3, Maryland

31 OCT 1956

Subject: Standardization of aircraft and Missile Components
To: Commander, Wright Air Development Center, ATTN: WCO, Wright-Patterson Air Force Base, Ohio

1. Attached correspondence is forwarded for review and preparation of a recommended ARDC course of action as discussed during conference, held Friday, 26 Oct 1956, at WCX, attended by representatives of AMC, ARDC and your Center.

2. This Headquarters has prepared an interim reply to Headquarters USAF letter in recognition of the problem, a copy of which is also attached as Inclosure 2. The 26 November 1956 deadline will be subjected to adjustment but should be observed to the extent of furnishing status report information to this Headquarters.

3. This survey is considered paramount to the OASD Project 610–46, established to determine the degree of standardization practicable, since the data developed will satisfy both letters. Complete cooperation with AMC is a requisite inasmuch as Headquarters USAF recognizes elements of responsibility shared by both Commands.

4. It is recommended that the extent of Industry coordination be determined in the development of existing boost pump specifications and standards (MIL–P–5238, MIL–P–8704 and Drawings MS 29532 thru MS 29541). HIAD currently re-

quires the contractor to provide booster pumps conforming to the general requirements of MIL–P–5238 by the preparation of a model specification in accordance with MIL–P–8704. This model specification is then subject to approval by WADC.

5. Weapons System technical concept and procurement policies will be examined and reflected in the recommendations submitted. By copy of this letter, Hq ARDC, Detachment #1, Wright-Patterson Air Force Base, is instructed to participate in this survey.

6. This Headquarters should be informed of the Office assigned primary responsibility to achieve coordinated center position and should be notified of any AMC–WADC Committee action contemplated.

BY ORDER OF THE COMMANDER:

L. M. TAYLOR,
Colonel, USAF
Director of Engineering
Deputy Commander/Research & Development

DEPARTMENT OF THE AIR FORCE

OFFICE OF THE CHIEF OF STAFF

UNITED STATES AIR FORCE

Washington, D. C.

24 October 1956

Subject: Standardization of Aircraft and Missile Components
To: Commander, Air Materiel Command, Wright-Patterson Air Force Base, Ohio
Commander, Air Research and Development Commnd, Baltimore, Maryland

1. During the past year, the General Accounting Office conducted a survey on Air Force controls relating to the standardization of aircraft components. A sample illustration of this survey covered the inadequacy of control over fuel booster pump production. The burden now has been placed on the Air Force to review this problem and take positive action to correct the deficiencies which have been made apparent.

2. The survey in question was initiated to determine:

a. The extent to which the possibilities of standardization are ignored in Air Force procurement policies

b. The general effect of such policies on original procurement and on supply and maintenance costs.

c. The most effective means of establishing and maintaining a practicable level and control of standardization.

3. It has been concluded by the General Accounting Office that because of inadequate control of components used by aircraft manufacturers the following have resulted:

a. Losses in design time
b. Added engineering manhours
c. Higher production costs
d. Increased supply and maintenance costs
e. Creation of monopolies

4. It is alleged that both component and airframe manufacturers are very much in favor of standardization as long as there is no interference with design prerogatives.

5. Now the Air Force is faced with the requirement for action to resolve those problems involving standardization, the controls thereof, and the methods to enforce these controls. These suggestions may fit the pattern of thinking as to how best to approach the problem.

a. First, it seems that, without jeopardizing the weapon system concept where we place primary discretion and responsibility on the airframe contractor, we should take a closer look at such items as fuel pumps, hydraulic pumps, actuators, etc. Such an appraisal of requirements for new design may require a management group such as the WSPO organization where both engineers and production specialists meet.

b. Second, for future planning, we can encourage closer relationships with industry. This could result in a better understanding of future requirements and of those standards to which we can adhere in the development of new items.

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c. Third, through appropriate industrial groups, and with military representation, it may be desirable to assure that design information of aircraft and missile components is cataloged and made available to weapon system manufacturers.

d. Fourth, standardization actions must continue with parcticular emphasis as to the degree in which standardization is feasible.

6. This problem is shared jointly by both your commands. A copy of the GAO draft is attached for your information. Meanwhile, separate correspondence is being sent to the Aircraft Industries Association (AIA) and the National Security Industrial Association (NSIA) asking them to treat this matter as a special subject through their appropriate panels.

[s] THOMAS D. WHITE
General, U. S. Air Force.
Vice Chief of Staff

TAB C

[Tab C held in subcommittee files. This is a draft report of the General Accounting Office. The final report is printed at the beginning of exhibit P.]

TAB D

HEADQUARTERS

WRIGHT AIR DEVEOPMENT CENTER

AIR RESEARCH AND DEVELOPMENT COMMAND

UNITED STATES AIR FORCE

Wright-Patterson Air Force Base, Ohio

WCO 26 MARCH 1957.

GENTLEMEN: A growing problem which confronts the Air Force seems to involve your organization and its basic interests.

The USAF is employing an increasing number of different weapons systems. The improved performance of these systems is being obtained at the price of complexity and with a greatly increased number of parts and assemblies in each system. The result is a tremendous increase in the number of items required in Air Force stock.

As a result, there is increasing concern over the apparent lack of use of standards. As an example, we have appended to this letter a copy of a "Report on Review of Air Force Controls Relating to the Standardization of Aircraft Fuel Booster Pumps". This report, which was prepared by the Defense Accounting and Auditing Division of the General Accounting Office, highlights more or less typical views and problems which we encounter in the area of Contractor-Furnished-Equipment.

As you probably know, the Air Force develops and provides to its systems contractors some airborne equipment, which is known as Government-Furnished-Aircraft-Equipment. Standards are somewhat more easily applied to these items than to Contractor-Furnished-Equipment (CFE). CFE, in distinction, is developed by and furnished by the prime system contractor, his associate contractors and his sub-contractors, and the equipment industry. It is in the area of CFE that our most difficult and pressing standardization problems arise.

We hope to have a meeting with representatives of industry similar to one which has been held with members of NSIA, ASA, ASME, AIA, AIEE, and SAE. The meeting was held on 26 February 1957. A copy of the minutes of this meeting are attached. The following three general questions were the basis of the previous meeting and will also be the subject of the industry meeting:

a. What degree of standardization of CFE aircraft equipment is possible in the environment which exists today?

b. What further general efforts can be undertaken to provide additional standardization, and what basic responsibilities should be assigned to what organizations to effect this improvement?

c. What reasonable estimate of improvement could be expected from these improved methods?

The Air Force has devoted a considerable amount of effort and time to investigation of this problem, and to definition of the various areas of difficulty. We plan to present the results of study as a foundation for the discussion itself.

We plan to hold the meeting at the Wright-Patterson Air Force Base on Thursday, 18 April 1957, starting at 0900 in Room 222, Building 14. Your attendance and contribution will be greatly appreciated. In your reply to this letter, would you include the name and telephone number of the individual who will plan to attend.

Sincerely,

RICHARD W. BARNES
Colonel, USAF
Assistant DCS/Plans and Operations

LIST OF PERSONNEL INVITED TO ATTEND CONFERENCE

Mr. J. D. Miner, Eng. Mgr., Westinghouse Electric Corp., 1625 K Street
Mr. Sam Daniels, Aircraft Industries Association, 15th and H Streets NW, Washington, D. C.
Mr. G. W. Lescher, Fairchild Engine & Airplane Corp., Hagerstown, Md.
Mr. R. J. Sandstrom, vice president of engineering, Bell Aircraft Corp., Post Office Box 1, Buffalo 5, N. Y.
Mr. J. D. Miner, engineering manager, Westinghouse Electriet Corp., 1625 K Street NW, Washington 6, D. C.
Mr. W. A. Gebhardt, manager of aircraft and engineering equipment, Bendix Products Division, Aviation Corp., South Bend 20, Ind.
Mr. L. S. Hobbs, vice chairman, United Aircraft Corp., East Hartford, Conn.
Mr. L. L. Aspelin, engineering manager, Thompson Products, Accessories Division, 23555 Euclid Avenue, Cleveland, Ohio
Mr. I. N. Palley, vice president of engineering, Temco Aircraft Co., Post Office Box 6191, Dallas, Tex.
Mr. Frank W. Fink, vice president and chief engineer, Ryan Aeronautical Co., Lindberg Drive, San Diego 12, Calif.
Mr. A. Kartvei, vice president of engineering, Republic Aviation Corp., Farmingdale, Long Island., N. Y.
Mr. R. H. Baker, manager of engineering service defense electronic products, Radio Corporation of America, Engineering Products Division, Camden 2, N. J.
Mr. K. Hobein, superintendent technical data, Pioneer-Central Division, Bendix Aviation Corp., Davenport, Ia.
Mr. Edgar Schmude, vice president of engineering, Northrop Aircraft Inc., Hawthorne, Calif.
Mr. H. A. Storms, chief engineer, North American Aviation Co., Inc., El Segundo, Calif.
Mr. J. A. Vaughan, manager of engineering, New York Air Brake Co., 720 Starbrick Avenue, Waltertown, N. Y.
Mr. R. H. Charles, executive vice president, McDonnel Aircraft Corp., Post Office Box 516, Municipal Airport, St. Louis 3, Mo.
Mr. G. S. Trimble, vice president of engineering, The Glenn L. Martin Co., Baltimore 3, Md.
Mr. Paul L. Hubbard, senior vice president, Lockheed Aircraft Corp., Post Office Box 551, Burbank, Calif.
Mr. E. A. Brittenham, Jr., chief engineer, Goodyear Aircraft Co., Akron 15, Ohio
Mr. D. S. Scott, assistant to president, Garrett Corp., 9851–9951 Sepulveda Boulevard, Los Angeles 45, Calif.
Mr. A. E. Raymond, vice president of engineering, Douglas Aircraft Co., Inc., 3000 Ocean Park Boulevard, Santa Monica, Calif.
Mr. R. C. Sebold, vice president of engineering, Convair Division, General Dynamics Corp., 3165 Pacific Highway, San Diego 12, Calif.
Mr. R. C. Blaylock, vice president of engineering, Chance Vought, Dallas, Tex.
Mr. E. C. Wells, vice president of engineering, Boeing Airplane Co., Seattle 14, Wash.
Mr. E. B. Newill, general manager, General Motors Corp., Allison Division, Indianapolis, Ind.
Headquarters United States Air Force
Headquarters Air Research and Development Command
Headquarters Air Materiel Command

Headquarters Air Research and Development Command, Detachment No. 1
Bureau of Aeronautics
Wright Air Development Center

MINUTES OF CONTRACTOR FURNISHED EQUIPMENT STANDARDIZATION CONFERENCE

HELD: 0900, 26 February 1957, Room 222, Building 14, Wright Air Development Center.

1. Conference was held to discuss the problem of Standardization of Contractor Furnished Equipment used in Weapon systems. Increased complexity of weapon systems and a growing number of specialized systems required to do the numerous tasks in a modern military situation, has resulted in an increase in the number of items required in logistic support. The Air Force has become increasingly concerned over this situation. This conference was called to discuss the problem and attempt to outline corrective measures which might limit the number of items designed into new weapon systems.

2. The following personnel were in attendance at the conference:

Colonel C. F. Begg, Chairman, WADC
Colonel R. W. Barnes, WADC
Colonel H. A. Boushey, Presentation, ARDC
ASME—Mr. F. P. Tisch; Mr. W. Stonehill
ASA—Vice Admiral W. A. Kitts 3rd; Mr. J. W. McNair
AIA—Mr. S. Daniels; Mr. I. C. Peterson
NSIA—Mr. G. Myers
AIEE—Mr. J. W. Allen
SAE—Mr. C. E. Mines, Mr. C. L. Sadler, Dr. A. Nutt, Mr. P. H. Jones, Mr. M. L. Stoner
DCS/D-1—Colonel J. Habeger; Mr. J. Cain
RCA—Mr. R. H. Baker
Bendix—Mr. T. A. Fuorry
BuAer, TD-2—Mr. F. Rasmussen, Mr. McCullough
ARDC—Colonel M. Taylor
AMC—Mr. J. Clendening, Mr. M. Oricko, Mr. M. Connelly (DEPSO)
ARDC Det #1—Lt. Colonel Jenkins
WADC—Mr. A. Adman, Mr. J. Burritt, Mr. G. Sheppard, Mr. L. Trenary, Mr. J. R. Bowden, Mr. C. F. Sopcak, Mr. R. L. King, Mr. W. McCandless

3. A prepared presentation "Standardization under the Weapon System Management Concept" was given by Colonel H. A. Boushey, Headquarters ARDC.

4. A very frank, lengthy discussion was held in which all contributed. Many interesting and important factors affecting standardization were presented in response to the following three questions:

a. What degree of standardization of CFE aircraft equipment is possible in the environment which exists today?

b. What further general efforts can be undertaken to provide additional standardization, and what basic responsibilities should be assigned to what organizations to effect this improvement?

c. What reasonable estimate of improvement could be expected from these improved methods?

5. The conclusions reached and recommendations made at the conference were based directly on the questions asked.

a. What degree of standardization of CFE aircraft equipment is possible in the environment which exists today?

(1) Standardization within a fast moving development area is difficult and extremely limited. Weapon systems are becoming increasingly specialized in their application, and more and more of such specialized systems are being required to perform specific tasks. Rapid obsolescence of these systems also limits the length of time available either to create or use standards.

(2) Standardization is rather good in the area of nuts, bolts, fasteners, and similar hardware items. Items of this nature are covered by design data which provides complete interchangeability between manufacturers (Chinese copy). This effort must continue and should be expanded where possible.

(3) Standardization of the more complex equipment including assemblies, items, and sub-systems is not possible to the same degree as for the hardware items. Standards which define families, groups, or interchangeability on a "form-fit-and-function" basis are possible and desirable. Actual item standardization in this area of equipment of intermediate complexity often may not be possible or of sufficient value to compensate for the effort, cost, and time required to effect such standards.

(4) Standardization of complex systems such as bombing-navigation systems, fire control systems, and weapon systems was not considered practical nor desirable.

b. What further general efforts can be undertaken to provide additional standardization, and what basic responsibilities should be assigned to what organizations to effect the improvement?

(1) Further efforts that should be undertaken are as follows:

(a) The Air Force must emphasize to industry the desire to more actively execute a standardization program. Coordination within the Air Force must be accomplished to insure that costs resulting from such effort are justifiable charges against government contracts. Also, since effects of such effort are long in coming, and continuous work is necessary, the USAF must maintain an active program in this area for a long, continuous period. Effort expended on a short program, dropped and forgotten after a year or two, would be a complete loss. Significant results of such a program are estimated to be obtained in the order of a minimum of five years.

(b) Industry must have an incentive to work in this area. Consideration of this work must be made in proposal evaluations and technical analysis of systems. Weight given to accomplishment in this area will stimulate work and insure greater cooperation.

(c) Speed in creating standards must be achieved. Broad standards require excessive time in preparation and coordination. After-the-fact standardization is of questionable value once the operational weapons and the supply system have been filled with non-standard items. If standards are to be used, they must be available when needed. The accelerated emphasis on weapon system developments demands an accelerated system to provide the many standards needed. Standards of limited applicability may permit limited coordination within the desired time schedule.

(2) It was agreed that improvement in the standardization program requires that industry and the professional societies and associations, working together, with the assistance and support of the Air Force, should seek quicker, simpler, and better ways of getting the job done within the framework of the weapon systems concept. Specifically, it was agreed that:

(a) The USAF should present the problem to the weapon systems contractors and to the equipment industry in a manner similar to the presentation to the technical societies and professional organizations.

(b) The AIA, as the industry association concerned, should, with the assistance and support of the Air Force, chairman an activity to determine, recommend, and initiate courses of action within industry that will improve and augment the standardization program.

(c) Once general courses of action and procedures are determined and agreed upon by the AIA and the Air Force, that the SAE and other technical societies should assist in studying and recommending the technical areas most susceptible to further standardization activity under the revised system.

(d) That the USAF should immediately explore ways and means by which it can make wider use of industrial standards.

(e) The USAF should review the various USAF bulletins affecting this area and realign them to agree with the conclusions reached from this effort.

c. What reasonable estimate of improvement could be expected from these improved methods?

(1) Limited, but definite, improvement is expected. The degree could not be determined or estimated without further work as recommended in paragraph b above.

Approved by:

RICHARD W. BARNES
Colonel, USAF
Asst. DCS/Plans and Operations

Prepared by:

C. F. SOPCAK
Technical Program Director
Development Operations Branch
Research and Development Division
Operations Office
DCS/Plans and Operations

90772—57——24

OASD Project 610–46 Fuel Booster Pumps, 8 February 1957
To: WCLPD–1 From: MCSIEA–1 Date: Mar. 6, 1957 Comment Nr. 2
Attn: Mr. V. E. Newman Mr. Nicklas/hrs
50279/B287/P215K

1. The following comments and data are furnished as requestd in basic correspondence:

a. Paragraph 5 (a) (1).

The general scope of WADC Supposal, dated 4 January 1957 is generally concurred in. Performance criteria was complied for fuel booster pumps currently being used in the Air Force in order that a comparison could be made between performance of currently used pumps and proposed categories as listed under Paragraph A of WADC Supposal, dated 4 January 1957. (Performance criteria is attached as Inclosure Nr. 3.) After comparison of these categories to the categories proposed by WADC, it was determined that only category 18 compared to WADC proposed category 2. From the attached listing it appears the majority of the pumps that do not meet a proposed category are 3000 PPH with a discharge pressure range from 8 to 10 PSI with a standard 1.5 inch discharge port size and 8,000 PPH with a discharge pressure range from 9 to 13 PSI with a standard 1.5 discharge port size. It is requested that WADC compare the present categories of fuel booster pumps with their proposed categories to determine if the above pumps should be incorporated. Proposed category 8 and 9 with a flow of 110,000 and 125,000 PPH flow appears to be beyond the normal flow of fuel booster pumps used on current design aircraft and unless their contemplated usage is on future design aircraft, these would fall in the range of "in flight refueling pumps". These pumps should be covered by separate specifications and requirements.

b. Paragraph 5 (a) (2).

Reference Paragraph B of WADC Supposal, dated 4 January 1957. It is recommended the following items will be controlled as prescribed below for each of the proposed categories:

(1) Mounting Flange.

(a) Oval type of flange (AN4135) for port flange mountings will be specified.

(2) Envelope.

(a) Maximum envelope dimensions will be specified.

(3) Discharge Ports.

(a) Provisions for both internal and external ports will be specified.

(b) Ports must conform to MS33555(ASG) and be compatible to standard specifications fitting for sizes referenced above with the particular category.

(4) Power Lead Exit Configuration.

(a) Fittings and detachable leads are not to be furnished as components of fuel booster pumps.

(b) Electrical leads will exit through pump flange to specified AN connector which will be located.

(c) AN connector must be one of the following which applies to pump:

1. AN _____ (Specific type to be determined by WADC.) Connector is used with DC single speed pump.

2. AN _____ (Specific type to be determined by WADC.) Connector is used with DC two speed pump.

3. AN _____ (Specific type to be determined by WADC.) Connector is used with AC single speed pump.

4. AN _____ (Specific type to be determined by WADC.) Connector is used with AC two speed pump.

(d) AN connector will be located _____ (Specific poistion to be determined by WADC) in relation to the External Discharge Port. (This is to insure all manufacturers pumps will have connector in same location and when interchanged in an aircraft the aircraft electrical lead will attach to the pump.)

(e) Radio noise filter will be part of the pump motor and mounted internally.

(5) Power Source.

(a) The drive member for the pump will be an electric motor, either DC or AC current.

(6) Sea level Calibration.

(a) Maximum voltage and amperage.

(b) Maximum and minimum discharge pressures.

(c) Maximum and minimum capacity. The above requirements will be specified.

(7) Altitude Climb Performance.
(a) Rapid climb to 80,000 feet.
(b) Average climb rate to an altitude for simulated altitude (Pressurization) of 35,000 feet.
(8) All pumps must incorporate by-pass valve with screen.
NOTE: The hydraulic requirement was omitted from items 4 and 5 as it is the opinion of this Headquarters that hydraulic driven fuel booster pumps should be covered by a separate specification and a separate list of contractual requirements.
(9) Items 4, 5, and 7 multiply the categories required by six.
c. Paragraph 5 (a) (3).
AMC cannot forsee any additional cost and manhours resulting from this action. Manhours should be reduced rather than increased since a reduction in the variety of procurements has a direct bearing on the time required for all actions required by AMC to establish requirements, and process the necessary data required for procurement, acceptance, storage and issue of materiel.
d. Paragraph 5 (a) (4).
The following means must be established to control standardization:
(1) Detail specifications for fuel booster pumps prepared by prime contractors must include as part of his specifications the latest Military and Governmental standards, and specifications, pertaining to fuel booster pumps. The prime contractors detail specifications must be reviewed by WADC in terms of effect on standardization program prior to approval by WADC.
(2) All Military and Governmental standards and specifications must be so prepared that individual interpretation will not result in non-comparible articles being procured.
(3) Any requests for deviation from fuel booster pump standards and specifications must be reviewed by WADC in terms of effect on standardization program prior to approval.
e. Paragraph 5 (a) (5).
The implementation of such a program will be highly beneficial to the Defense Program. The benefits derived will be as follows:
(1) Eventual reduction in the number of categories of fuel booster pumps, and from this reduction should result more effective support of weapons through improved overhaul schedules, improved logistical computations and improved procurement facilities.
(2) Problem areas are not foreseen in AMC Procurement, Quality Control, Supply and Maintenance Divisions through implementation of such a program. In order to attain the highest degree of effectiveness, Procurement and Quality Control must enforce all requirements set forth in this program.
f. Paragraph 5 (b) (1).
As a result of current simplification action by OCAMA:
(1) Leads and fittings have been removed from fuel booster pumps when detachable, and stocked under individual part number in applicable property class.
(2) Radio noise filters have not been detached from fuel booster pumps since it is not considered feasible or advantageous at this time. Fuel booster pump leads are internally connected, shielded, and normally 72 inches or more in length, for pumps without base mounted noise filters. Electric leads on pumps with base mounted filters extend out of booster pump only far enough to connect to the radio noise filter terminals.
(3) Leads, Fittings, Caps, and other pump accessories are stocked as individual parts by manufacturer's part number. In those cases where these items meet a Military Standard, they are stocked under a common Military Standard part number.
g. Paragraph 5 (b) (2)
Care was exercised to maintain and establish further interchangeability during the current simplification studies conducted by OCAMA. It is considered imperative that any retrofit of Air Force aircraft not be considered until the Detailed Plan for standardization is completed, so that comparison of Air Force and Navy aircraft, together with fuel booster pump assets can be made. At that time feasibility of a retrofit program can be determined.
2. The initial study of fuel booster pumps in the Air Force system has been completed by OCSJC with the aid of personnel of Maintenance Engineering Division, OCAMA. This study and actions taken resulted in a reduction of active configurations in the Air Force Supply System as follows:
a. Total configurations of active Fuel Booster Pumps in Air Force Supply System prior to study. 431.

b. Items changed or that will be changed from "Active" to "Reference" resulting from consolidation, modification or breaking down into components. 251.

c. Active Fuel Booster Pumps remaining in Air Force Supply System after study. 180.

M. G. FERGUSON, Jr.
Colonel, USAF
Chief, Cataloging & Standardization Division
Directorate of Supply

Performance criteria compiled by OCAMA on currently used fuel booster pumps

Categories	Flow (PPH)	Disc. Press. (PSI)	Port Size (In.)	Nr. of Different Part Number Pumps in this category
1	240	11	Non-Std	7
2	600	8	Non-Std	1
3	600	20	Non-Std	2
4	1,800	7	Non-Std	1
5	1,800	8	Non-Std	1
6	1,800	9	Non-Std	1
7	2,700	8	1.120	6
8	3,000	8	1.438	19
9	3,000	8	Non-Std	11
10	3,000	9	1.5	29
11	3,000	9	Non-Std	21
12	3,000	10	1.5	41
13	3,000	17	Non-Std	2
14	3,600	10	1.5	22
15	3,600	20	1.5	14
16	4,350	25	1.5	4
17	6,000	11	1.5	3
18	6,000	15	1.5	51
19	6,000	16	1.5	9
20	6,000	27.5	1.5	1
21	6,200	32	Non-Std	1
22	8,000	9	1.5	4
23	8,000	10	1.5	20
24	8,000	12	Non-Std	1
25	8,000	13	1.5	1
26	8,000	12.5	1.5	3
27	8,000	17	1.5	2
28	8,250	10	1.5	2
29	8,400	28	1.5	12
30	9,000	14	1.5	3
31	9,000	20	1.5	3
32	9,000	40	1.5	1
33	10,000	6.5	1.5	2
34	10,000	12	1.5	4
35	10,000	15	1.5	1
36	10,000	25	1.5	2
37	11,000	12	1.5	2
38	12,400	23.8	Non-Std	1
39	12,500	12.5	1.5	4
40	15,000	15	1.885	4
41	20,000	10	1.885	1
42	21,600	20	1.5	1
43	32,500	10	Non-Std	6
44	32,500	16	Non-Std	1
45	40,000	6	2.380	2

NOTE.—Non-Std are those which do not conform to MS33555(ASG).

DISPOSITION FORM

OASD PROJECT 610–46 FUEL BOOSTER PUMPS

To MCSIEA–1 From WCLPD–1 Date 8 Feb 57 Comment No. 1

Attn: Mr. Slick

Mr. V. E. Newman/jk
24275/B18D/RmD219

1. This is in reference to preliminary discussions of the subject project between representatives of AMC and Power Plant Laboratory WADC on 16 and 18 January 1957.

2. At the 16 January meeting Mr. V. E. Newman submitted to the AMC representatives copies of two supposals for discussion purposes. The first supposal dated 4 January 1957 outlined the performance and physical criteria necessary to control item standardization of fuel booster pumps. The second supposal dated 16 January 1957 covered briefly some aspects of the supply and logistics of standardization of the fuel booster pumps by interchangeability, or thru retrofit of current service aircraft.

3. A copy of each of the supposals referenced above are included for identification or reference purposes only. The supposals are not to be considered valid as either a standardization study or proposal as representative of the WADC position as referenced in AMC conference report dated 25 January covering the 18 January meeting.

4. As a result of the above referenced meetings the AMC representatives were requested and readily agreed to furnish statements and supply data to support an AMC position to be established as a result of their studies and investigations.

5. In order to accomplish a complete feasibility study it is imperative that AMC furnish at least the following supporting data for inclusion in the final report on the standardization study, OASD Project 610–46:

(a) *Efforts Necessary to Establish Feasibility of Standardization For The Future (WADC Supposal dated 4 January 1957).*—

(1) Indicate a concurrence therewith or submit an alternate standardization action.

(2) Include fittings and leads standardization action deemed necessary, if applicable.

(3) Establish costs and manpower necessary to implement the AMC standardization action.

(4) What means must be established to control?

(5) What will it mean to the Defense Program if such a program is implemented? Give consideration to probable problem areas throughout AMC Procurement, Quality Control, Supply and Maintenance Divisions, which would be created as a result of implementation of this program.

(b) *Standardization Efforts Necessary to Implement Interchangeability or Possible Retrofit of Present Stock (WADC Supposal dated 16 January 1957).*—

(1) Indicate how and by what combination, assembled components or individual parts, of basic fuel booster pumps, leads and fittings that are identified as to current inventories by supply and maintenance activities.

(2) Indicate current procedures or future actions to establish interchangeability or possible retrofit with regard to fuel booster pumps, as they pertain to item standardization relative to current service aircraft.

6. Due date of February 1957 for completion of project was established by OASD. Inasmuch as AMC has been working on this project since November 1956, it is imperative that this data be forwarded to WCLPD at the earliest date possible. It shall be noted that data received will be resolved, by the Power Plant Laboratory, between AMC, WSPO and WADC. After final resolution by the Air Force, it will be necessary to obtain concurrence of the Army and Navy.

VIRGIL E. NEWMAN
Chief, Specification & Design Branch
Power Plant Laboratory

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16 January 1957
E. O. 903A–2915

Subject: Fuel Booster Pump—Standardization Study
FSC 2915—Project No. 610–46

A. From a supply and a logistics viewpoint it would appear to be desirable to standardize on current service aircraft through retrofit. However, this action is not considered feasible for the following reasons:

(1) Few aircraft use the pump models listed on the QPL without modification. This means that practically all pumps used in present day aircraft would require modification. For many applications aircraft structure and fuel tanks would require modification to accommodate Standard Air Force typed pumps which meet the envelope requirements of the military type specification but not the aircraft installation requirements. The above modification program is not considered feasible primarily because of the basic costs and the man-hours required to support this program.

(2) In addition to the above it should also be pointed out that should a retrofit program be effected many of the earlier type B–18 pumps would have to be scrapped. The later type B–18 pumps incorporate model improvements which give them the capability of satisfying increased flow and more rapid climb requirements. It would be impossible to modify the earlier type B–18 pump to meet advanced requirements and thereby provide for interchangeability between different aircraft. These units are acceptable for the aircraft for which they are designed and therefore scrapping of the pump is not justifiable.

(3) The following are examples relative to the above comments:

(a) Lear Romec has ten (10) different model type B–18 pumps of which only two are acceptable for installation in the B–47 because of body casting interference.

(b) The F–100 and C–130 use "O" rings as a flange seal in lieu of gaskets and therefore a rework of the pump flange and fuel tank would be necessary to accommodate interchangeability.

(c) The type B–18 pumps used on F–84F aircraft are rated at 9000 PPH in lieu of 6000 PPH per the military specification and in addition are qualified for a more rapid climb to altitude than those used on B–47.

A. Performance and Physical Criteria Considered Necessary to Control Items for Effecting Standardization.

The following are the basic performance and installation criteria categories:

No. of Categories	Flow (PPH)	Discharge Pressure (PSI)	Discharge Port Size (in.)
1	3,000	15	1.5
2	6,000	15	1.5
3	15,000	15	1.5
4	25,000	20	2.0
5	35,000	20	2.0
6	50,000	20	2.5
7	75,000	30	2.5
8	100,000	30	3.0
9	125,000	30	3.0

B. The following items will be controlled as prescribed below for each of the above categories:

(1) Mounting flange—one oval type flange for bottom mounting will be specified. The location of pump drain fitting will also be specified.

(2) Envelope—maximum envelope dimensions will be specified.

(3) Discharge Port—provisions for both internal and external discharge ports, compatible with standard discharge fittings for the size referenced above with the particular category will be specified.

(4) Power Lead Exit Configuration—Electrical leads will exit through pump flange to an AN type connector which will be located. Hydraulic AND10050 port will be located so as to exit through pump flange.

(5) Power Source—the drive member for the pump will be either an electric or hydraulic motor.

(6) Sea Level Calibration—Maximum power and minimum and maximum discharge pressure will be specified.

(7) Altitude Climb Performance—Two climb tests will be specified. One test will be at a rapid climb rate to 80000 ft. The second test will be at a average climb rate to an altitude or simulated altitude (tank pressurization) of 3500 ft.

C. Items 5 and 7 above multiply the categories required by four (4). The minimum number of categories therefore is thirty six (36).

Tab F

"OASC Project 610–46 Fuel Booster Pumps", 8 Feb 57
To WCLPD–1 From RDZSPG Date 5 Mar 57 Comment Nr 2

Lt Col Jenkins/tba
34233/B16/Post A–115

1. Reference is made to recent conversation with Mr. Buchtel, WCLPD–1 (24275) concerning the "Fuel Boost Pump—Standardization Study FSC 2915—Project Nr 610–46", dated 4 January 1957 (Inclosure Nr 1)

2. A discussion of subject matter within RDZS has resulted in the following. These comments should be treated as suggestions only for your consideration in the study.

a. This office concurs generally with the proposal. The laboratory having technical cognizance for aircraft fuel pumps should determine the feasibility of all the standards to be included as an Air Force requirement with subsequent coordination with the other Departments towards a maximum effort in standardization.

b. It is recommended that connectors be of an AN type and explosion proof. If safety will permit connectors should be mounted on the pump assembly proper. This will eliminate the lead length standardization problem. Electric motors should conform to Military or Federal specifications, be radio-interference free, explosion-proof with the envelope and electrical input defined for each category. For hydraulic driven motors envelopes volumetric inputs and outputs should be specified for each category.

(1) Ports should be specified to accept AN Fittings. If AMC's maintenance concept ("Low Down Concept") deems it necessary to stock pump assemblies, including fittings, it is recommended the standardization study consider including them as a part of the pump. If fittings are included, design provisions should be made to permit quick and easy adjustment, by the mechanic, to any of the several possible angles at the time of installation. In any event the approach to a standard family of pumps should be compatible with the AMC method stocking spares.

c. It is believed there will be no significant change to the impact on the WSPO cost and manpower. However, there could be some change within WADC which can be most accurately determined by the laboratory after the resolution of all parameters against which the proposal will be ultimately based.

d. It is believed that WSPO's will be able to adequately administer appropriate management practices if use of a "standard family of pumps" is considered feasible. Greater emphasis will have to be placed on a mutual effort between the WSPO, WADC and the contractor to achieve design compromises permitting use of the "standards". The evolution of new requirements based on new application must also be recognized.

(1) In the event use of a "standard family of pump" is deemed appropriate, such action could be phased into current weapon system programs on an organized basis with due consideration being given to the individual merits of each. A hasty "across the board one time clean up action" would be ill advised. The very nature of Fuel Boost Pumps is such as to require periodic testing, inspecting, maintenance, replacement and overhaul. Therefore the greatest overall tangible benefit and ultimate economy of a "standard family of pumps" will be realized by the using organizations in the elimination of excessive line item stocking and the corresponding reduction in total quantities required to maintain stocks at ther proper levels. As a direct result there will be a savings of spares procurement dollars equal to a sum that is directly proportional to the unit cost and the total realized reduction in stocks. An additional dollar savings, not so easily recognized, however, would be realized by warehousing, maintenance and overhaul facilities not with standing reducing AOCP'S and providing support to AMS's low down time maintenance concept. It should be reemphasized that any approach to improving the present situation should be compatible with policies relative to line item stocking in support of AMC's low down time maintenance concept. Compatibility between ARDC's engineering and procurement data support concepts and AMC's procurement, stocking and maintenance concepts are essential prerequisites to a sound approach. In addition a joint AMC and ARDC management procedure should be established to insure that revisions to either commands policies or concepts result in compatible actions by the other command.

L. E. JENKINS
Lt. Colonel, USAF
Chief GFAE Configuration Control Branch
Plans and Program Control Office
Directorate of Systems Management

DISPOSITION FORM

Subject: CASD Project 610–46 Fuel Booster Pumps
To: RDZSTG From: WCLPD–1 Date 8 February 1957 Comment No. 1
ATTN: Lt. Col. L. E. Jenkins

Mr. V. E. Newman/jk
24275/B18D/PmD219

1. This is in reference to preliminary discussion of the subject project between a representative of RDZSTG and Power Plant Laboratory WADC on 21 January 1957.

2. On 21 January Mr. K. A. Buchtel submitted to Lt. Col. L. E. Jenkins a supposal for discussion purposes. The supposal dated 4 January 1957 outlined the performance and physical criteria necessary to control item standardization of fuel booster pumps.

3. A copy of the supposal referenced above is included for identification or reference purposes only. The supposal is not to be considered valid as either a standardization study or proposal as representative of the WATC position.

4. As a result of the above referenced meeting the RDZSTG representative was requested and readily agreed to furnish statements and supply data to support a WSPO position to be established as a result of their studies and investigations.

5. In order to accomplish a complete feasibility study it is imperative that WSPO furnish at least the following supporting data for inclusion in the final report on the standardization study, OASD Project 610–46:

a. *Efforts Necessary to Establish Feasibility of Standardization For The Future (WADC Supposal dated 4 January 1957).*

(1) Indicate a concurrence therewith or submit an alternate standardization action.

(2) Include fittings and leads standardization action deemed necessary, if applicable.

(3) Establish costs and manpower necessary to implement the WSPO standardization action.

(4) What means must be established to control?

(5) What will it mean to the Defense Program if such a program is implemented? Give consideration to probable problem areas through WSPO which would be created as a result of implementation of this program.

5. Due date of February 1957 for completion of project was established by OASD. It is imperative that this data be forwarded to WCLPD at the earliest date possible. It shall be noted that data received will be resolved, by the Power Plant Laboratory, between AMC, WSPO and WADC. After final resolution by the Air Force, it will be necessary to obtain concurrence of the Army and Navy.

VIRGIL E. NEWMAN
Chief, Specifications & Design Branch
Power Plant Laboratory

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4 January 1957
E. O. 903A–2915

Subject: Fuel Booster Pump—Standardization Study FSC–2915—Project No. 610–46

A. Perfomance and Physical Criteria Considered Necessary to Control Items for Effecting Standardization.

The following are the basic performance and installation criteria categories:

No. of Categories	Flow (PPH)	Discharge Pressure (PSI)	Discharge Port Size (in.)
1	3,000	15	1.5
2	6,000	15	1.5
3	15,000	15	1.5
4	25,000	20	2.0
5	35,000	20	2.0
6	50,000	20	2.5
7	75,000	30	2.5
8	100,000	30	3.0
9	125,000	30	3.0

B. The following items will be controlled as prescribed below for each of the above categories:

(1) Mounting flange—one oval type flange for bottom mounting will be specified. The location of pump drain fitting will also be specified.

(2) Envelope—maximum envelope dimensions will be specified.

(3) Discharge Port—Provisions for both internal and external discharge ports, compatible with standard discharge fittings for the size referenced above with the particular category will be specified.

(4) Power Lead Exit Configuration—Electrical leads will exit through pump flange to an AN type connector which will be located. Hydraulic AND10050 port will be located so as to exit through pump flange.

(5) Power Source—The drive member for the pump will be either an electric or hydraulic motor.

(6) Sea Level Calibration—Maximum power and minimum and maximum discharge pressure will be specified.

(7) Altitude Climb Performance—Two climb tests will be specified. One test will be at a rapid climb rate to 80,000 ft. The second test will be at an average climb rate to an altitude or simulated altitude (tank pressurization) of 35,000 ft.

C. Items 5 and 7 above multiply the categories required by four (4). The minimum number of categories therefore is thirty six (36).

TAB G

NWS/TL-3 (jr)
F20

21 MAR 1957

1065
First endorsement on Buaer ltr A58-PP-320/6 dtd 18 March 1957
From: Bureau of Aeronautics General Representative, Central District
To: Commander, Wright Air Development Center
Attn: Power Plant Laboratory (WCLPD)
Subj: Pumps; fuel booster, standardization of
1. Forwarded.

R. D. RUSHLOW
By direction

DEPARTMENT OF THE NAVY

BUREAU OF AERONAUTICS

Washington, D. C.

in reply refer to
Aer-PP-320/6
18 MAR 1957

From: Chief, Bureau of Aeronautics
To: Commander, Wright Air Development Center (WCLPD), Wright-Patterson Air Force Base, Ohio
Via: Bureau of Aeronautics General Representative, Central District, Dayton, Ohio
Subj: Pumps; fuel booster, standardization of
Ref: (a) FSC 2915, OASD Project 610-46; E. O. 930A-2915
(b) BuAerltr Aer-PP-3231/110 of 19 Nov 1956
Encl: (1) Five (5) copies Comments on standardization of tank mounted fuel pumps

1. Reference (b) forwarded preliminary comments on standardization of tank mounted fuel pumps under reference (a) project. Amplifying comments are submitted herewith as enclosure (1).

2. Pursuant to reference (b), it is felt that standardization can be greatly facilitated by dividing tank mounted pumps into three (3) categories according to their functional use in the fuel system. Further subdivision of these categories according to motive power and pumping performance will undoubtedly be required. It is expected that latter subdivision will present the most difficulty in any standardization program. Also it is expected that standardization in the transfer pump category may be impracticable except for larger tanks where existing pumps of the other two categories can be adapted to additional

use as transfer pumps, as currently practiced in aircraft powered by reciprocating engines. The comments of enclosure (1) are based on the above philosophy.

W. W. RUST
By direction

COMMENTS ON STANDARDIZATION IN THE FIELD OF TANK MOUNTED FUEL PUMPS

GENERAL

1. Tank mounted fuel pumps may be divided into three functional categories as follows:

A. *Emergency-Boost*, to serve as an emergency source of fuel pressure for carburetors in the event of failure of engine driven fuel pumps and to furnish vapor-free fuel to engine driven fuel pumps on reciprocating engines.

B. *Boost*, to furnish vapor-free fuel to the customer's connection on gas turbine engines.

C. *Transfer*, to transfer fuel from one tank or aircraft to another or to dump fuel from an aircraft.

2. Category A is confined to reciprocating engine applications with Direct Current as the electrical motive power.

3. Category B is confined to gas turbine applications and will probably require subdivision into four classes according to motive power:

(1) Direct Current.
(2) Alternating Current.
(3) Hydraulic.
(4) Pneumatic.

4. Category C, because of less stringent pumping requirements (flow rate, pressure, etc.) but more severe environmental requirements (ambient temperature, space limitations, etc.) than the other categories, will require subdivision as to motive power.

5. All three categories will require various degrees of further subdivision into sizes according to pumping characteristics.

6. Pumps are currently identified by the manufacturer's part number. A method of model designation utilizing symbols for the various subdivisions mentioned above will require to accommodate interchangeable pumps of different manufacture or to accommodate such pumps of the same manufacture.

DISCUSSION

1. It is considered impracticable to use boost pumps as emergency sources of fuel pressure for metering fuel in jet engine applications. Therefore, it is reasonable to assume that *emergency-boost* pumps will be required for reciprocating engines only. Existing pumps in this category are considered adequate for current and future aircraft powered by reciprocating engines. Standardization within this category, then, amounts to reducing the number of existing pumps to a minimum number of basic configurations devoid of such optional items as outlet fittings, ratio noise filters, variable lengths of electrical leads, etc., and grouping them according to mounting flange and pumping capacity. In this process, priority should be given to pumps that have been qualified under MIL–P–5238. Pumps designed prior to 1950 should be reviewed with the following in mind:

(a) modernization by rework where practicable
(b) salvage of useable bits and pieces
(c) scrap where (a) or (b) is not practicable.

2. Existing pumps in Category A (Emergency-Boost) are adequate for current and future requirements for Category C (Transfer) applications involving reciprocating engines. It is expected that new developments in Category C will be confined to the field of gas turbine powered aircraft. MIL–P–5238, general specification for Boost Pumps, is not satisfactory for pumps in Category C. Requirements of this specification are too stringent in some respects and too lenient in others. It is believed that a separate specification, with reduced emphasis on pumping performance and increased emphasis on environmental conditions peculiar to transfer pumps, will facilitate standardization and procurement of pumps in Category C.

3. The use of Category B (Boost) pumps will be confined to gas turbine powered aircraft just as Category A pumps will be confined to aircraft powered by reciprocating engines. Because of the severity of pumping requirements (high

rates of climb over wide ranges of fuel flow) that must be met in category B, a certain amount of matching of pump capacity to engine fuel consumption is unavoidable; i. e., the anticipated flow spectrum for this category must be sub-divided into increments that will conserve weight, energy, and space in aircraft without unduly penalizing procurement, maintenance, and logistics. The smaller family of pumps in this category may require further sub-division into oval and round flange types. It is also expected that Category A as well as Category C must be sub-divided into at least four classes according to motive power (AC electric, DC electric, Hydraulic, and Pneumatic) in order to meet the needs of alternate or dual power-source protection against battle damage. It is further expected that parallel families of double ended pumps will be required for negative "G" application.

4. A system of model designation based on the various degrees of sub-division must be developed, preferably by representatives of the industry acting through an appropriate S. A. E. Committee such as A–16A. Because of probable use of the same model in two or more categories, the model designation need not and probably should not include a designator identifying the pump with any one category. The foregoing can be illustrated as follows:

Flange configuration might be designated as;

VG=12-hole, oval flange with flat gasket.
VR=8-hole, oval flange with O-Ring seal.
RG=8 or 16-hole, rounded flange with flat gasket.
RR=10-hole, round flange with O-Ring seal.

Double-ended configuration might be designated by the letter "D" prefixed to the flange designator.

Capacity might be designated as

2=2000 pph
3=3000 pph
6=6000 pph
etc.,

Motive power might be designated as

*DC=direct current, electric
AC=alternating current, electric
PN=pneumatic.

*Suffix 2 might be used to designate 2 speed capability currently needed for Category A.

Under such a system, Thompson TF–31600 and TF–51000 pumps (both classed as USAF type B–25) might be designated as Model VG3DC2 to denote that they are 2-speed, DC electric motor driven pumps rated at 3000 pph and having 12-hole oval flanges for flat gaskets. Similarly, Thompson TF–54100 and TF–54200 pumps (both classed as double-ended USAF type B–30) might be designated as 2RG7DC or Thompson TF–58000 (USAF type B–18B) might be designated RR6DC.

SUMMARY

1. There are actually three functional categories of tank mounted fuel pumps (four, if refueling pumps are classed separately from transfer pumps.)

2. Fuel pumps must be given suitable model designations based on factors that determine physical and functional interchangeability. Manufacturers' part numbers do not meet requirements for this purpose.

3. Standardization must be based on industry-wide (preferably S. A. E. sponsored) model designations rather than various manufacturers' part numbers.

4. The degree of standardization attainable or the number of model designations required will depend upon where the inevitable line of compromise between performance and such economic factors as production, maintenance, and logistics can be drawn.

TAB H

NW2/TL–3(jr)
F20 2 APR 1957
First endorsement on BUAER ltr Aer–PP–320/10 dtd 27 March 1957
From: Bureau of Aeronautics General Representative, Central District
To: Commander, Wright Air Development Center
Attn: Power Plant Laboratory (WCLPD)
Subj: Pumps; fuel booster; standardization of
1. Forwarded.

R. D. RUSHLOW
By direction

DEPARTMENT OF THE NAVY

BUREAU OF AERONAUTICS

Washington, D. C.

In Reply Refer To
Aer–PP–320/10
27 MAR 1957

From: Chief, Bureau of Aeronautics
To: Commander, Wright Air Development Center (WCLPD), Wright-Patterson Air Force Base, Ohio
Via: Bureau of Aeronautics General Representative, Central District, Wright-Patterson Air Force Base, Dayton, Ohio
Subj: Pumps; fuel booster; standardization of
Ref: (a) BuAer ltr Aer–PP–320/6 of 18 Mar 1957

1. The following is submitted in response to a verbal request for further clarification of opinion on the desirability and feasibility of standardization in the fuel pump field.

2. To facilitate standardization and subsequent control thereof, reference (a) recommended subdivision of tank mounted fuel pumps into three functional categories, namely,

A. Emergency-Boost
B. Boost
C. Transfer.

3. Standardization within Category A is desirable and is considered feasible on the basis of form, fit and function after reducing existing pumps to a minimum number of basic configurations devoid of such optional items as outlet fittings, radio noise filters, length of leads, etc., and then eliminating minor variations by one or more of the following actions:

(a) rework where practicable
(b) salvage useable bits and pieces
(c) scrap.

4. Standardization within Category C is considered impracticable because of an inability to predict size, shape and orientation of fuel tanks in which pumps of this category will be used. In other words, standardization on the basis of form, fit, and function in this category would impose unacceptable limitations on aircraft design and is, therefore, considered to be undesirable.

5. Standardization within Category B is desirable and is considered to be feasible on a form, fit, function basis provided allowance is made for the four probable power sources that are expected to be widely used in future aircraft, namely,

DC electric
AC electric
Hydraulic
Pneumatic.

6. Inasmuch as pumps are assemblies rather than detail parts, they are properly identified by parts lists rather than part numbers. Pumps of the same manufacture as well as pumps of different manufacture can be expected to bear different parts list numbers while being entirely interchangeable on a form, fit, function basis. It is considered essential that a suitable system of model designation be devised, preferably by SAE Committee A–16A, into which interchangeable assemblies may be grouped regardless of parts list numbers. This system is currently used for vane type pumps on reciprocating engines. For example, model AN–4102–1 pump includes Ceco 9159AAC and 9750, Pesco 2P–771–CB–1 and 2P–771–CC–1, Romec RG–7600, and Thompson TF–3800–1 parts lists.

7. It is concluded that the bulk of standardization effort in Category A will devolve on maintenance and supply where as engineering will be primarily responsible for standardization within Category B.

T. WASHINGTON, JR.
By direction

TAB I

H022UYB014MEUB028PFB005
MM RJEDWP
DE RZEPFO 80
M 281630Z
FM CO TRECOM FTEUSTIS VA
TO COMDR AIR MATERIEL COMD WRIGHT-PATTERSON AFB DAYTON OHIO DA CRNC
BT
FROM TCREC DASH MS 71 SGD KOLETTY FOR MCLATS-C400
1. REF FONECON BETWEEN CAPT J H PROCTOR, TCAACO, AND MR S DESTEFANO, THIS COMD, ON 25 MARCH 1957, REGARDING FUEL BOOSTER PUMPS USED ON ARMY AIRCRAFT.
2. TC CONSIDERS STANDARDIZATION OF FUEL BOOSTER PUMPS FEASIBLE AND RECOMMENDS INITIATION OF PROJECTTDRUNT
CFN TCREC MS 71 MCLATS-8400 J H S 25 1957
28/2252Z

TAB J

28 March 1957

POWER PLANT LABORATORY (WADC)

Position

RELATIVE TO STANDARDIZATION STUDY OF FUEL BOOSTER PUMPS

1. *Existing Procedure*—No attempt has been made to enforce the use of a set of "standard family of pumps", which has resulted in the following procedure:

a. A general performance specification (MIL–P–5238A(ASG)–Amendment–2) specifies requirements desired such as component parts, materials, design, construction, interchangeability, threaded parts, weight, finish, performance, identification, workmanship, etc. It further specifies that the pump shall satisfy the performance requirements covered by the provisions for "preproduction approval testing", which are those tests performed after award of contract on samples representative of the production item, to determine that the item meets the requirements of this specification. Tests of these pumps are made by the contractor or the Government, at the discretion of the Government. It also requires that a Fuel Booster Pump model specification conforming to Specification MIL–P–8704 shall be submitted by the airframe manufacturer for approval.

b. A model specification, prepared by the contractor or pump manufacturer, in accordance with the outline specification (MIL–P–8704(ASG)), specifies those requirements which describe that which is necessary for a specific installation, and also wherein the contractor has deviated from the requirements of the general specification.

c. A model specification for a Fuel Booster Pump, needed for a specific application, is submitted by the Aircraft or Weapons System contractor to the Procuring Service for approval.

d. Each pump, covered by the model specification, is made to the requirements of the individual Aircraft or Weapons System contractor. These pumps are procured by the contractor (CFE).

2. *Future Standardization*—

a. Revise the current Fuel Booster Pump specifications to provide service requirements necessary. This could include appropriate data extracted from paragraph B. of "Supposal—dated 4 January 1957 (Tabs F & G), as considered applicable.

b. Provide adequate control by review and approval of model specifications. Supply systems will provide additional control by stocking basic models only.

c. Industry will have to justify establishment of new models of Fuel Booster Pumps.

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